PRIMARY SURVEILLANCE RADAR FOR ATC

SCANTER 4002 X-BAND RADAR

TERMA

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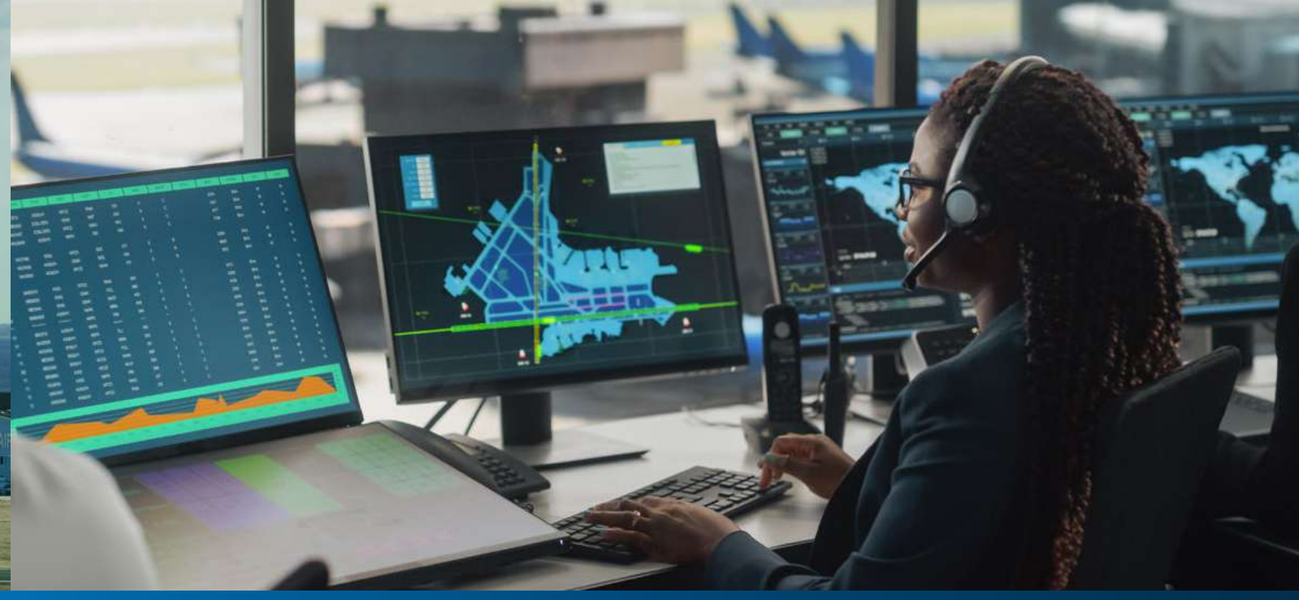

It’s Time to Future-Proof Your PSR Solution

In a world where wind farms are expanding and new technologies are emerging, air traffic control requires new PSR systems that deliver a clutter-free radar image. A system that maintains the integrity of air surveillance, without conflicting with present and future technologies of the surrounding world.

Enter SCANTER 4002, Terma’s answer to modern ATC challenges. This state-of-the-art X-band radar system rises above traditional limitations, offering superior detection capabilities and enhanced situational awareness in an increasingly complex environment. The system embodies a cost-effective, compact solution that never compromises on quality or performance, making it an indispensable asset for modern ATC operations.

A Complete Air Picture from 0-60 NM

The SCANTER 4002 provides unsurpassed detection accuracy – ranging from small targets to airliners, and unique high-resolution imaging and precision throughout the entire instrumented range.

The system’s 6-meter cell size resolution extends across a 60 NM instrumented range, delivering unmatched target discrimination and consistent performance. With vertical coverage up to FL250+, this radar guarantees comprehensive surveillance of all airspace users, enhancing safety and efficiency in the increasingly crowded skies.

See Through Windfarm Clutter

Windfarms are essential for our sustainable future, but they pose acute challenges to traditional radar systems. As we embrace this age of renewable energy, the SCANTER 4002 stands out with its ability to discern and track small targets even within and behind wind farms, without increasing false alarm rates.

Its sophisticated algorithms ensure that the integrity of radar imagery is preserved, thus removing the need for costly infill radars, or establishing blanking zones. This capability upholds the vision of green energy without sacrificing the safety and clarity of your ATC radar coverage.

A Cost-Effective Solution

The Terma PSR solution isn’t just about advanced technology; the SCANTER 4002 is designed for seamless integration with standard ASTERIX interfaces. Drawing from the legacy of the SCANTER series, this COTS product encapsulates the same robust technology platform that users worldwide trust.

The radar’s modest appearance allows for significant cost savings, boasting a minimal mechanical footprint, low power requirements, and simplified installation and maintenance processes. For your airport, this means reduced operational and capital expenses, making the SCANTER 4002 a prudent choice, no-matter your airport size.

230+ X-band Radars in Operation

With the SCANTER 4002 X-band radar, you choose proven technology. With over 230 SCANTER X-band radars deployed in airports and air force bases across the globe, your ATC is in good company.

Terma’s rich heritage in crafting military and space technologies means that your SCANTER PSR system is built on a foundation of resilience and reliability. All our radars are designed for the critical situations where there is no room for error – including managing air traffic in a crowded airspace.

Beyond the technology, Terma’s comprehensive service and support network stands ready to ensure the success of your radar operations. For us, it’s not about being different; it’s about being ahead, without compromising reliability or performance. For our airport partners, it’s a new standard in primary surveillance radar solutions.

SCANTER 4002 Specifications

Frequency band	9000-9200 MHz
Frequency management	Time/frequency diversity (6 frequencies)
Transmitter (8 modules)	6 kW, fault tolerant solid state (GaN)
Instrumented range	Up to 60 NM
Minimal detection range	0.15 NM
Antenna	18-foot, $Cosec^2$ elevation pattern and circular polarization
Rotation rate	12-20 RPM (default 15 RPM)
Accuracy range	< 25 m bias (< 60 m sigma)
Accuracy azimuth	< 0.1° bias (< 0.15° sigma)
Resolution range	< 36 m (measured at 10 dB SNR)
Resolution azimuth	< 1°
Interface	Ethernet UDP/TCP IP
Interface format	ASTERIX (Cat. 010, 034, 048, 240)

Operating in the aerospace, defense, and security sector, Terma supports customers and partners all over the world. With more than 1,900 committed employees globally, we develop and manufacture 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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