



# NAVAL AIR & SURFACE SURVEILLANCE RADAR

SCANTER 4603



**TERMA<sup>®</sup>**  
ALLIES IN INNOVATION



# Naval Air & Surface Surveillance Radar

A confident situational awareness picture is paramount in patrolling own territorial waters, from the littoral to the 200 nmi border of the Exclusive Economic Zone (EEZ). This is needed in order to conduct efficient surveillance, policing, inspection, Search & Rescue (SAR), and even combat missions.

The SCANTER 4603 radar provides fully automatic volume surveillance and early detection of multiple simultaneous air- and surface targets. With an extended horizontal detection range of up to 96 nmi, the SCANTER 4603 radar provides a confident situational awareness picture. This can be further enhanced using the optional Target Classification.

The SCANTER 4603 radar is ideally suited for Offshore Patrol Vessels, Fast Attack Craft, Corvettes, and Amphibious Vessels (LPD/LST).

## Operational Capabilities

### Small Target Detection

The SCANTER 4603 radar relies on X-band for market leading spatial resolution. The high spatial resolution translates into superior target separation, ensuring reliable detection and tracking of very small air and surface targets, and produces a clear and confident high-resolution situational awareness picture (day and night and in all weather conditions). For operations such as surveillance, patrolling, law enforcement, interception, boarding, insertion & extraction, and SAR, the SCANTER 4603 with high spatial resolution is the ideal choice.

### Search & Rescue

The combination of simultaneous detection of small surface targets and helicopter control makes the SCANTER 4603 radar a valuable asset in supporting SAR operations.

### Operational Profiles

To support missions for combat, surveillance, policing, inspection, and SAR, the SCANTER 4603 radar utilizes operational profiles with adaptive suppression of sea and land clutter. The operational profiles ensure easy transition between missions and provide superior target separation to improve planning and coordination for increased mission effectiveness. Dedicated combat profiles with high update rates combined with enhanced accuracy of surface target positions provide Track-While-Scan (TWS) functionality.

## Product Characteristics

The SCANTER 4603 is a fully coherent pulse compression radar using Waveform Diversity and Automatic Adaptation to the environment. The advanced digital signal processing combined with antenna characteristics, including high gain and narrow beam, delivers unparalleled spatial resolution.

### Automatic Environmental Adaptation

To provide a confident domain awareness around own unit, regardless of weather conditions, SCANTER 4603 comes with adaptive suppression of sea and land clutter. Automatic environmental adaptation reduces the load on the operator and ensures a clear and confident high-resolution situational awareness picture.

### Electronic Counter-Countermeasure

All SCANTER naval radars come with ECCM (Electronic Counter-CounterMeasure) anti-jamming features for increased platform effectiveness and protection of own platform. Jamming from EW equipment is eliminated by using e.g. low-side-lobe antennas, waveform diversity, pulse compression, reduced sectors, spread spectrum transmission, interference filtering, and Pulse Repetition Frequency (PRF) staggering.



12' Dual Beam High Gain antenna with IFF antenna on a light-weight stabilized platform - one of the available antenna systems

### Multi-Hypothesis Tracking

Multi-Hypothesis Tracking (MHT) is a Terma proprietary technology that enables tracking with improved continuity in cluttered environments (e.g. rain or high sea state), and it is an integral part of building a confident situational awareness picture.

### Low Life Cycle Cost

The SCANTER 4603 radar relies on GaN solid state technology to boost performance and reduce maintenance requirements. Line replaceable units are used throughout the family of sensors, ensuring long time sustainment and low life cycle costs. GaN solid state technology provides an MTBF/MTBCF 3 times better than competing technologies.

### Configuration Options

The SCANTER 4603 comes with two options of Solid State Amplifier with equivalent pulse power up to 4.5 MW and 9 MW, and can be combined with various antenna configurations. The Dual Beam High Gain antenna offers switchable polarization between horizontal and circular, ensuring rain penetration using X-band.

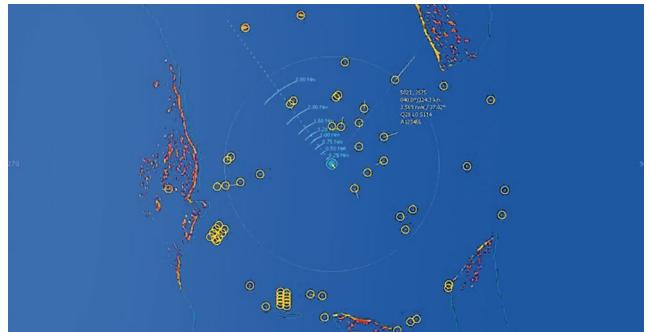
### IFF Integration

The SCANTER 4603 radar is prepared for integration of various IFF interrogators, providing full advisory and positive aircraft control beyond the capability of a 3D primary surveillance sensor.

### Proven Track Record

Terma has more than 60 years of Surveillance & Mission Systems experience and more than 3,000 radar systems in service worldwide. Navies, Coast Guards, and other high-demanding authorities around the world rely on our high resolution surveillance capabilities for securing the maritime domain and the sea lines of communication.

Crisp and clear radar video from SCANTER 4603





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.