COASTAL SURVEILLANCE AND VTS

SCANTER 5000 RADAR SERIES

Coastal Surveillance and VTS Radar

SCANTER 5000 Series for Surveillance

The SCANTER 5000 Series radar is specifically designed for Vessel Traffic Services (VTS) and Coastal Surveillance Systems (CSS) applications. The SCANTER 5000 VTS & CSS radar provides reliable sea surface surveillance and will detect the smallest non-cooperative targets during extreme environmental conditions. The radar can optionally be supplied with Doppler-based processing for enhanced long-range, fast-moving target detection.

In VTS applications, the SCANTER 5000 Series radar is used for monitoring of:

- All vessel movements
- Buoys and other fixed targets
- Pilot boarding operations
- Anchorages

In CSS applications, the SCANTER 5000 is an essential tool for dependable detection of:

- Smugglers in very fast boats
- Illegal immigrants traveling in small, slow boats
- Boats and jet skies with hostile intentions e.g. piracy
- Illegal fishing

Operational Capabilities

References

The SCANTER 5000 Series has been successfully deployed at major ports, including Hong Kong, Hamburg, and Singapore, and used by coast guards in Norway, Spain, and Colombia.

IALA Compliance

The SCANTER 5000 Series complies with IALA Guideline 1111 recommendations for VTS and exceeds the CSS demands for situational awareness (advanced level).

Antennas

The SCANTER 5000 Series transceivers can use existing antennas; however, a variety of Terma antennas is available to match requirements for different needs and applications – Terma Line Array antennas provide high resolution, low side-lobes, high gain, low maintenance costs, and are a perfect match for the transceiver's Frequency and Time Diversity capabilities.

Easy System Integration

With both digital and analog interfaces, the SCANTER 5000 Series is easily integrated with both new and existing surveillance and safety systems.

Product Characteristics

Available in high-power (SCANTER 5202) and low-power (SCANTER 5102) versions, the transceiver provides radar video, plots, tracks, control, and BITE service status all available through the transceiver's LAN interface. Conventional analog and digital video are also available.

A front panel display allows for a quick view of service status, whilst the included Radar Service Tool software provides access to powerful radar imaging, control, recording and playback, as well as Built-in Test Equipment (BITE), error handling, fault finding, and Line Replaceable Unit (LRU) replacement guidance.

An optional embedded ET2 tracker offers tracking of fast, agile, and small targets in severe weather conditions and, at the same time, reliably tracks slow moving targets.

- Increased resolution – 3m cell size delivers unsurpassed weather penetration
- Improved Frequency Diversity and Time Diversity for enhanced small target detection
- High immunity against interference
- Transmission power adjustable in sectors – to match desired range and avoid unnecessary radiation of selected areas
- Radar video distribution on LAN
- Extremely high reliability – MTBFC ≥ 50,000 hours and very low maintenance costs
- Optional Doppler processing (MTI) for short-range, low-level air surveillance to support Search and Rescue operations

Based on the SCANTER Radar Technology

Terma has developed and manufactured radar systems for more than 60 years and installed +3,000 radar systems worldwide. This experience is valued by coast guards protecting 65% of all coastal shores depending on Terma's sensor technology and appreciated by the largest ports that strive for reliable and economical VTS sensor solutions.

Key Benefits

- 50 W and 350 W peak power Solid State Power Amplifier (SSPA)
- Integrated, agile tracking capability
- Combined Surface and Air Surveillance option
- Low cost of ownership
- Superior performance
- Software defined design – flexible and extensible

Key Figures

Weight	77 kg
h x w x d	990 mm x 497 mm x 305 mm
Type	Solid State power amplifier
Frequency	9.0 GHz to 9.2 and 9.225 to 9.5 GHz
Sector Transmission	up to 16 sectors
Sampling	14 bit IF @ 400 MHz
Dynamic range	>140 dB overall
Noise figure	<2.5 dB
Emitter	50 W and 350 W peak* - 10 W and 70W average (at 20% duty cicle)
Profile settings	16
Min. detection range	30 m
BITE measurements	Fully integrated

**In the 9.0-9.2GHz band 300W peak power*

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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