Coastal Surveillance and VTS
SCANTER 5000 Series

TERMA NORTH AMERICA
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, IMO and RoHS 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.

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
- Buoy 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
- Smugglers and jet skis with hostile intentions e.g. piracy
- Illegal fishing
- Search and Rescue operations

Product Characteristics
Available in high-power (SCANTER 5202) and low-power (SCANTER 5102) versions, the transceiver’s LAN interface provides radar video, plots, tracks, control, and BITE service status. 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, easy wizard setup, 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 detection and 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 nearly 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 200 W Solid State Power Amplifier (SSPA)
- Integrated, agile tracking capability
- Combined Surface and Air Surveillance option
- Low cost of ownership
- Superior performance
- Software-defined design – ease of updates

Key Figures

<table>
<thead>
<tr>
<th>Weight</th>
<th>77 kg</th>
</tr>
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<tbody>
<tr>
<td>L x W x H</td>
<td>990 mm x 497 mm x 305 mm</td>
</tr>
<tr>
<td>Type</td>
<td>Solid State power amplifier</td>
</tr>
<tr>
<td>Frequency</td>
<td>9.0 GHz to 9.2 and 9.25 to 9.5 GHz</td>
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<tr>
<td>Sector Transmission</td>
<td>up to 16 sectors</td>
</tr>
<tr>
<td>Sampling</td>
<td>14 bit IF @ 400 MHz</td>
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<tr>
<td>Dynamic range</td>
<td>&gt;140 dB overall</td>
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<tr>
<td>Emitter</td>
<td>&lt;2.5 dB</td>
</tr>
<tr>
<td>Emitter</td>
<td>50 W and 220 W peak – 10 W and 40 W average, respectively</td>
</tr>
<tr>
<td>Profile settings</td>
<td>10</td>
</tr>
<tr>
<td>Max. detection range</td>
<td>30 nm</td>
</tr>
<tr>
<td>BITE measurements</td>
<td>Fully integrated</td>
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Operating in the aerospace, defense, and security sector, Terma supports customers and partners all over the world. With more than 1,400 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 in the Netherlands, Germany, Belgium, UK, India, UAE, Singapore as well as a wholly-owned U.S. subsidiary, Terma North America Inc. Terma North America Inc. is headquartered in Arlington, in the Washington D.C. area, with other offices in Georgia, Texas, and Virginia.