



SCANTER 6000 Naval Surveillance Radar





Naval Surveillance Radar

NAVAL SURVEILLANCE RADAR

The SCANTER 6000 radar series offers superior detection and tracking capabilities of small surface targets and of air targets in the near lower airspace around the vessel. The Surface Surveillance capabilities of the SCANTER 6000 series are ideal for search-and-rescue operations and law enforcement tasks, e.g. control of illegal immigration, smugglers, and piracy. Thus, the SCANTER 6000 series is a major contributor to the Situational Awareness picture for all types of vessels from Border Police and Patrol Vessels to Frigates.

The SCANTER 6000 series is designed with a modular and open system architecture allowing easy integration and future upgrades. Cooling by internal ventilation and anti-condensation heating for operation in hot and humid areas is standard and require no utility services from the vessel. The SCANTER 6000 series is designed to comply with MIL-STD-810F, MIL-STD-1399/300A and EMC standards in accordance with EN60945 for Maritime navigation and radio communication equipment and systems to allow reliable operation in harsh maritime environments.

The SCANTER 6000 series is founded on Terma's more than 60 years of experience with development of radars for Navies, Coast Guards, and other high-demanding authorities around the world.

OPERATIONAL CAPABILITIES

SURFACE SURVEILLANCE

The SCANTER 6000 series provides superior surface patrolling capabilities by detecting and tracking small targets from the vessel side and all the way to the radar horizon – delivering uninterrupted, all-weather Surface Surveillance.

MONITORING LOW AIRSPACE

The SCANTER 6000 series monitors the near lower airspace around the vessel and is capable of detecting and tracking both propeller and jet aircraft up to 10-15 nmi and up to 6000 ft. altitude providing low airspace monitoring and surveillance.

HELICOPTER CONTROL

The SCANTER 6000 series enables the vessel to control a helicopter in its short range operations, allowing for landing control on own ship or at remote locations, significantly increasing the operational capabilities of the vessel.

SEARCH AND RESCUE

Objects in distress are in need of immediate help and rely on radar capabilities to track their movement and guide and control the search-and-rescue operation to their location. The SCANTER 6000 series delivers the speed and accuracy needed for mission success. The SCANTER 6000 series' capability to simultaneously detect small surface targets and control and track helicopters makes the SCANTER 6000 series extremely well-suited for search-and-rescue operations.



Integrated with Terma's C-Flex Command & Control (C2) system, search-and-rescue operations can be performed much more effectively due to standard search patterns, such as expanding square, parallel track, sector survey, etc., and with individual settings of search width, search speed, etc. depending on weather conditions.

For additional protection of naval platforms, the SCANTER 6000 series offers a variety of self-protection techniques (ECCM), e.g. Frequency Diversity, Reduced power in sectors, PRF stagger, and (optional) Frequency Agility.

NAVIGATION

The SCANTER 6000 series outperforms current high-end navigation radars in all areas on simultaneous detection at short, medium, and long range.

SYSTEM KEY FEATURES

SYSTEM COMPONENTS

- Antenna with integrated turning unit, various sizes 7', 9', 12', various polarizations (Circular and/or horizontal) and beam shapes (fan,- or Cosecant2)
- fully solid state transceiver with integrated signal processor, tracking processor and distribution unit

TRANSCIEVER KEY FEATURES

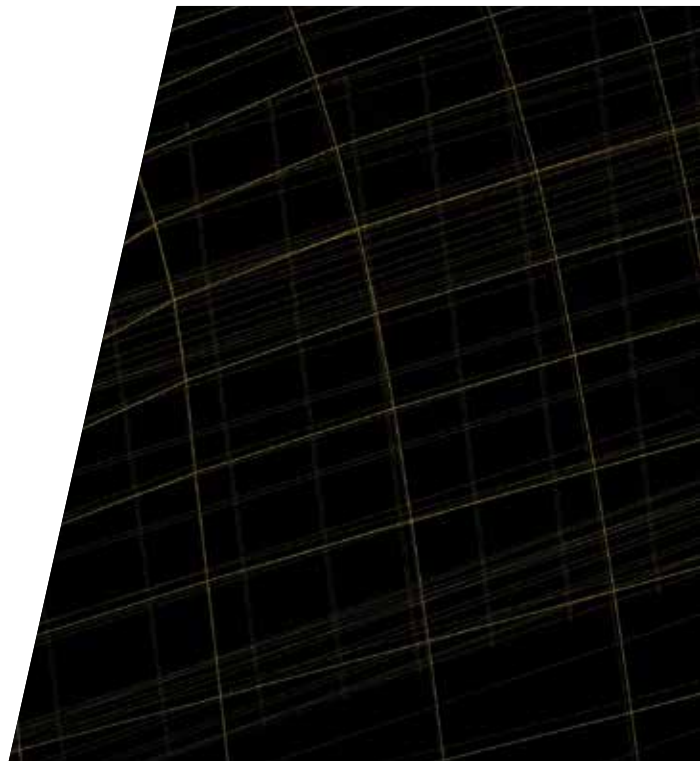
- X-band operating in the frequency range 9250 - 9500MHz
- Pulse compression radar with a compression ratio up to 1500:1
- Range sidelobes >60dB providing suppression of unwanted reflections from large objects
- Dual architecture providing simultaneous surface/navigation, and air channels
- Range resolution: better than 12m with 3m range cell size
- Frequency diversity combining 6 simultaneous frequencies
- Peak power of 200W or equivalent to max 300kW
- 20% duty cycle giving 40W of average power
- Instrumented range to 96nmi
- Short range: <30m from the antenna
- Typical detection envelope of small to medium size helicopters is >15nmi up to an altitude of >2000ft
- Maximum PRF 20kHz
- Automatic adaptation to changing environments e.g. automatic suppression of sea and rain clutter
- Active interference rejection
- Video interface to external equipment via LAN, digital, or analogue interfaces
- Optional embedded plot extraction and tracking processor
- Track status and STANAG5516 quality among target kinematic properties included in every track message
- Maximum target track velocity is 500m/s (configurable)
- Remote control and monitoring of all parameters via LAN among others transmission status/mode, profile selection and full BITE on all sensor system components
- Antenna update rates step less from 6-48RPM to support helicopter approach control where high update rates is required.
- ECCM features (Frequency agility/multiple frequency, LPI like mode of operation, Power sectors, staggered PRF's up to 50%)
- Comprehensive Built-In Test Equipment

Operating in the aerospace, defense, and security sector, Terma supports customers and partners all over the world. With more than 1,100 committed employees globally, we develop and manufacture mission-critical products and solutions that meet exacting 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.

Headquartered in Aarhus, Denmark, Terma has subsidiaries and operations in The Netherlands, Germany, India, UAE, UK, 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, Alabama, and Virginia.



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