



DEFENCE

Coastal | Off-Shore

TWINGARD

2D RADAR

TWINGARD is a **compact, lightweight system** for **low-altitude** and **surface target surveillance**. It interfaces with radar data processors through **digital links** for **advanced monitoring**. This system offers **dual detection modes**, featuring both single and dual antenna configurations for versatile aerial and surface tracking. Enhanced with an up to 800W solid-state power amplifier, TWINGARD provides robust power for consistent operation. TWINGARD systems **excel in challenging weather**,

noise rejection, and **advanced signal processing**. Additionally, a redundant transceiver is available for enhanced reliability. Enhanced with **solid-state technology**, they ensure optimal performance and minimal maintenance. Capable of seamlessly integrating with external systems by exporting acquired tracks. TWINGARD offers unparalleled **stealth** and **reliability**, making the 2D ideal for the most demanding coastal and Off-Shore surveillance operations.

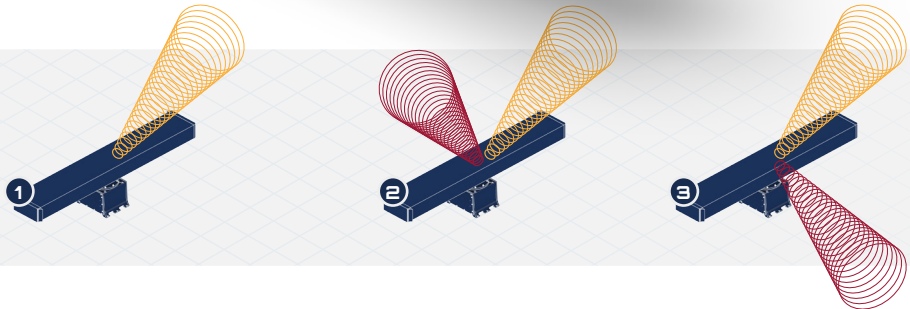
KEY STRENGTHS

- **Dual Detection Modes:** Offers both single and dual antenna configurations for versatile aerial and surface tracking.
- **Up to 800W Solid State Power Amplifier:** Provides robust power for consistent operation.
- **Antennas:** Dual 12ft Quasi cosec² or 12ft Quasi cosec² and 12ft Fan-beam antenna options.
- **Redundant Transceiver:** Available for enhanced reliability.
- **High Performance in Adverse Conditions:** Excels in challenging environments with superior noise rejection and signal processing.
- **Third-party Integration:** Capable of seamlessly integrating with external systems by exporting acquired tracks.
- **Tactical Flexibility:** Provides tactical flexibility for high-stakes.



AVAILABLE DETECTION MODE

- 1 LOW ALTITUDE
- 2 LOW ALTITUDE (DOUBLE HIT)
- 3 SURFACE + LOW ALTITUDE



MAIN FEATURES

Zero Attenuation

This innovative concept integrates **transceiver into the turning unit**, eliminating the need for waveguide paths. This **reduces installation time and costs** significantly while enhancing **short-range radar visibility and echo strength**.

Plug & Play

This radar series uses **advanced fiber optic** connections to simplify installation with a **"Plug & Play" design**, ensuring fast data transmission and strong signal integrity. The reduction in onsite wiring decreases human error and eliminates the need for special tools, streamlining setup and enhancing performance.

Easy Maintenance

We prioritize preventive maintenance over corrective measures, focusing on **proactive strategies**. Our commitment to quality extends to **reliability** through technical measures aimed at reducing the need for preventive maintenance tasks and **minimizing total life-cycle costs**.

RADAR DISPLAY

TWINGARD is capable of seamlessly integrating with external systems by exporting **over 1000 targets simultaneously**. As an option, it can be provided with its own dedicated radar display, which simplifies operations and significantly enhances safety. It offers advanced features such as **Full Chart Radar**, which integrates detailed charts with radar data, **alarm zone management**, **tactical functions**, and **multi-sensor target fusion** that combines radar and AIS for accurate target identification. It also includes a **Picture-in-Picture (PIP)** feature, allowing operators to view real-time video feeds for better decision-making, ensuring all critical information is readily available for **safe and efficient operations**.



SPECIFICATION

TRANSMITTER			
Operating Frequency	9300 ÷ 9500 MHz	Peak power	800W (59dBm)
SSPA RF peak	500 - 2500 Hz	Pulse width	Programmable from 40ns to 100µs (Depending On Mode)
LPI	32 steps down to ≤ 1W		
Functions	Frequency Diversity	Duty ratio	Up to 20%
RECEIVER			
Noise figure	≤ 2.5dB (Low Noise Front-End)	Multi channel	16bit if sampling @ 100 MHz
Receiver bandwidth	UP TO 40 MHz	Range sidelobes	< -60dB
Dynamic range	≥ 140 dB (STC Limiter, depending on configuration)	Minimum discernible signal (MDS)	-130 dB
CONFIGURATIONS			
Transceiver	UP TO 800 W		
Antenna	Quasi Cossec²	Quasi Cossec² + Quasi Cossec² (Enhanced)	Quasi Cossec² + Fan Beam (Switchable)
			Quasi Cossec² + Fan Beam (Simultaneously)

SYSTEM CONFIGURATION



INTEGRATED LOGISTIC SUPPORT



Longevity, Reliability, Remote Support

To **enhance efficiency** and **reduce costs**, our systems offer **full remote access** for **direct transmission of diagnostic logs**, minimizing onsite visits, reducing **operational expenses**, and improving turnaround times. Our Service Level Agreement (**SLA**) ensures this **efficient support**. Each Line Replaceable Unit (**LRU**) has a **QR code for quick information access**, improving communication and service responsiveness.



Client-Centric Support

We prioritize client support throughout the entire process. Our technical team conducts **on-site system commissioning**, including **standalone** and **live tests** in various environmental conditions alongside cooperating vessels. Comprehensive **technical documentation**, structured with DataModules following the **S1000D standard**, accompanies our systems.



After-Sales Services & SLA Options

We offer **after-sales services** such as **installation and maintenance courses**, along with an advanced **ticketing platform** for streamlined communication. Our maintenance services, including preventive, corrective, and **SLA options**, are tailored to meet the specific operational needs of our customers. We have **service centers** strategically located across the globe.



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