ICS TECHNOLOGIES

YOUR MISSION, OUR TARGET

SECURITY E SURVEILLANCE | Naval

TWINGARD N

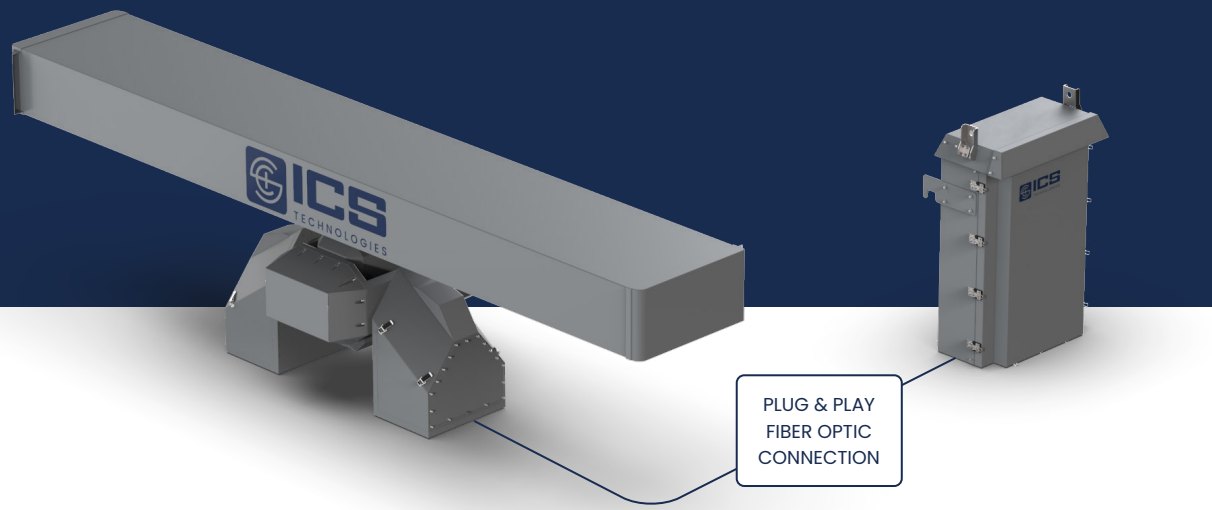
2D STABILIZED NAVIGATION RADAR

TWINGARD N is a **compact**, **lightweight system** designed specifically for the surveillance of **low-altitude** and **surface targets**. It interfaces with radar data processors through **digital links** for **advanced monitoring**. This capability is essential for **monitoring** and **tracking objects** such as small aircraft, drones, and maritime vessels that operate close to the ground or water surface. The system's advanced radar technology enables precise detection and tracking of these targets, even in complex and cluttered environments. Key features include a **ship motion stabilization platform** for reliable performance in rough seas. TWINGARD systems excel in challenging weather, noise rejection, and advanced signal processing. Enhanced with solid-state technology, they ensure optimal performance and minimal maintenance.

TWINGARD N offers unparalleled **reliability**, making the 2DN ideal for demanding naval operations.

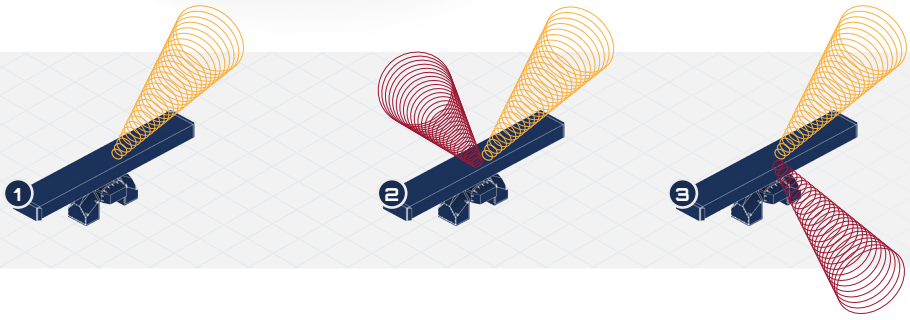
KEY STRENGHTS

- **Dual Detection Modes:** Offers both single and dual antenna configurations for versatile aerial and surface tracking.
- **Stabilization Platform:** Includes a ship motion stabilization platform for reliable performance in rough seas.
- **Up to 800W Solid State Power Amplifier:** Provides robust power for consistent operation.
- **Stabilized 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.



AVAILAVLE DETECTION MODE

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



MAIN FEATURES

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

The standard radar navigation display **simplifies bridge navigation** and operations, enhancing safety. It can **track over 1000 targets** and offers advanced features such as **Full Chart Radar, multi-radar option, multi-sensor target fusion** (radar and AIS), and **Picture-in-Picture** (PIP) display of real-time video from the onboard EOS. It can scale up to a **Multi-Function Display** (MFD) version with **ECDIS** and **CONNING** software or be integrated into an **Integrated Bridge System** (IBS).

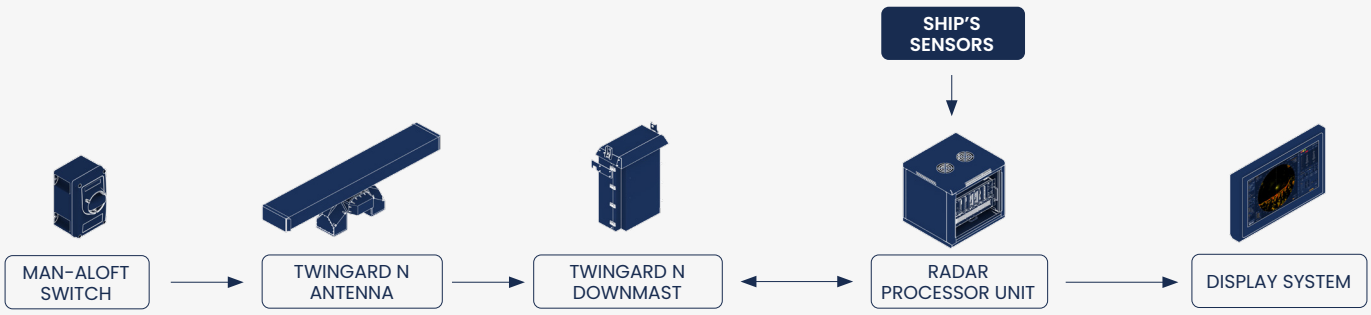
SPECIFICATION

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 Cosec²	Quasi Cosec² + Quasi Cosec² (Enhanced)	Quasi Cosec² + Fan Beam (Switchable)	Quasi Cosec² + Fan Beam (Simultaneously)
Stabilization	± 25° ROLL / ± 10° PITCH			

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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