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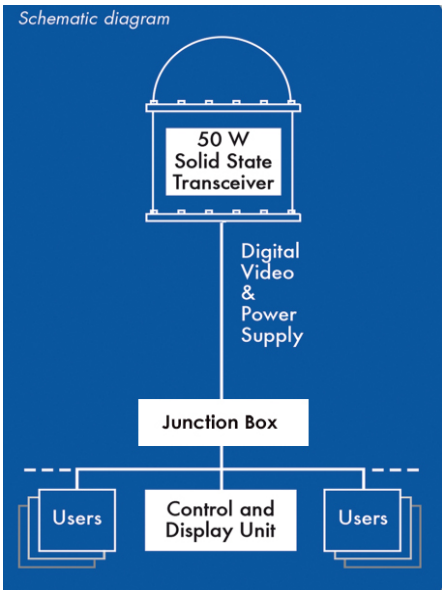
NR-50

Navigation Radar For Submarines

The NR-50 is a new-generation solid-state radar for navigation, specifically designed for cost-effective, easy installation during submarine retrofit and new submarine construction.

EASY INTEGRATION

Featuring a customizable mast interface slot, the NR-50 is designed to be integrated on existing or new submarine platforms. It allows the elimination of an in-hull passage typically needed for radar installation, increasing the overall integrity and soundness ot the hull ot the submarine. The radar's newly designed robust and pressure-proof radome protects the sensor trom the harshest external environmental conditions.



The NR-50 sensor is a pulse-compressed X-band transceiver. Transmission power can be selected by the user, from less than 1 watt (peak) up to 50 watts. The antenna is a slotted waveguide specially designed for navigation and surface applications. Its low weight and reduced dimensions allow for easy installation on submarine masts.

NR-50 Radar is developed in partnership with GEM Elettronica.

INTERFACES
Ethernet, optional (RS-232, RS-485, RS-422)
ASCII, NMEA, ASTERIX (optional)
Radar video distribution via WiFi link (optional)
Redundant RJ45 Ethernet or LC multimode optical fiber (optional)

PROTOCOL
IEC-61162-1 ed. 5.0
IEC-61162-450 FDIS

FULLY SOLID STATE RADAR MAIN SPECIFICATIONS	
Frequencies	Programmable within 9300 - 9500 MHz
Transmission power	50 watts (peak)
Sector blanking	Up to 10
Maintenance	Not necessary
Optional	Triggering of SARTs
Tracker ARPA targets	Up to 200
Blanking signal	Available for ESM
Weight	160 kg
Power consumption	225W ± 20%

ANTENNA SYSTEMS	
Type	Slotted waveguide
Azimuth main beam	≤ 4°
Elevation main beam	≤ 25°
Rotating Rate	22 rpm
Pressure Tight	more details provided in the technical specifications

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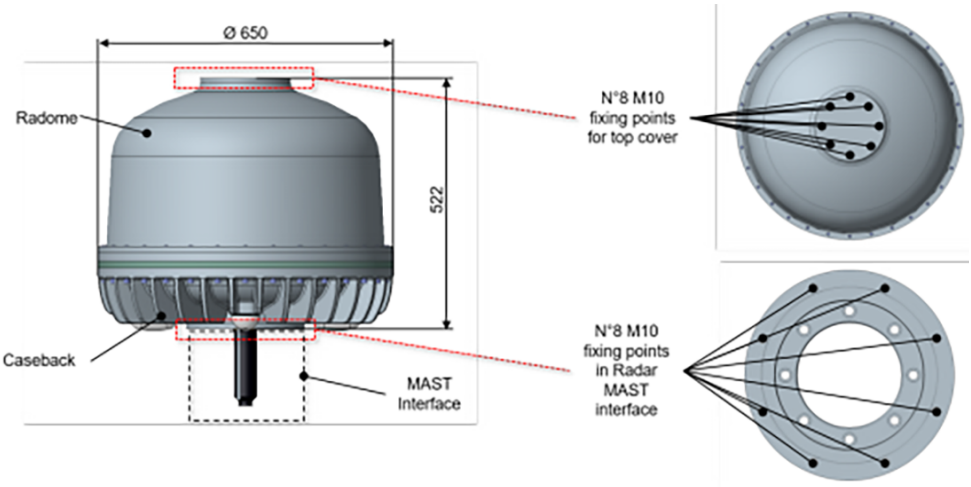

ENVIRONMENTAL FEATURES		
Operating temperature	-25° C to +55° C	According to MIL-STD-810G
Storage temperature	-30° C to +70° C	According to MIL-STD-810G
Damp heat	93% relative humidity @ 40° C	According to MIL-STD-810G
Shock	30 g 11 ms	According to MIL-STD-810G
Salt fog	According to MIL-STD-810G	
Vibration	According to MIL-STD-167-1A. Type I	
EMC/EMI	According to MIL-STD-461G	

RECEIVER	
Sensitivity	< -122 dBm
Azimuth Main Beam	< 5.5.dB
Elevation Main Beam	100 dB
Rotating Rate	20 MHz
Converter (at IF)	16-bit ADC
Pressure Tight	According to MIL-STD-167-1A. Type I

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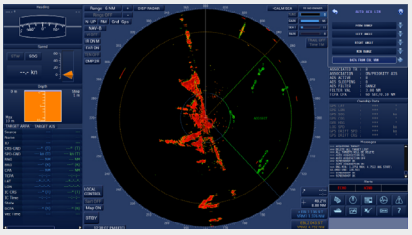

This sheet has been reviewed in accordance with the International Traffic in Arms Regulations (ITAR), 22 CFR Part 120.11, and the Export Administration Regulations (EAR), 15 CFR 734(3)(b)(3), and may be released without export restrictions.

This document consists of general capabilities information that is not defined as controlled technical data under ITAR Part 120.10 or EAR Part 772.

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L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.

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