

LEONARDO ELECTRONICS

# SPS-732 FAMILY NAVAL AIR/SURFACE SURVEILLANCE RADAR

The solid state fully coherent 2D X-band air/surface surveillance SPS-732 family combines typical features of naval radars belonging to different class in one radar series.

## VERSATILITY

The SPS-732 radar family offers superior performance for any ship class, including Landing Craft, Offshore Patrol Vessels, Large Support Ships and Corvettes/Frigates.

On board of medium/large-size vessels, the SPS-732 middle and high-end version are a valuable, higher performance/price ratio alternative to 3D radars even against high threatening targets like sea-skimming missiles in all sea and weather conditions.

## UNIQUE FEATURES

Programmable transmitting powers (down to hundred mWs) and proprietary complex waveform/frequency management combine true Low Probability of Interception (LPI) capabilities, with surveillance and tracking requirements against surface and air targets.

Dual (Doppler/non Doppler) processing channels allow contemporary detection and tracking of both air and sea targets in order to precisely designate both type of threat on board Fire Control Systems.

Unmatched features like super-resolution modes, zoom, Range Profile Imaging While Scan and Over-The-Horizon Surveillance mode set the standards for what the most demanding Navies expect from modern 2D high-performing naval radars.

Very short blind range, high resolution processing channel permit to obtain IMO compliant navigation function and Helo control/guidance even in adverse clutter condition.

## UPMAST SOLUTION

Solid State Transmitter (> 400W) and Front End Receiver (TX-FER) are an outdoor unit designed to be installed close to the antenna in order to maximize radar performances.

## LOW THROUGH LIFE COSTS

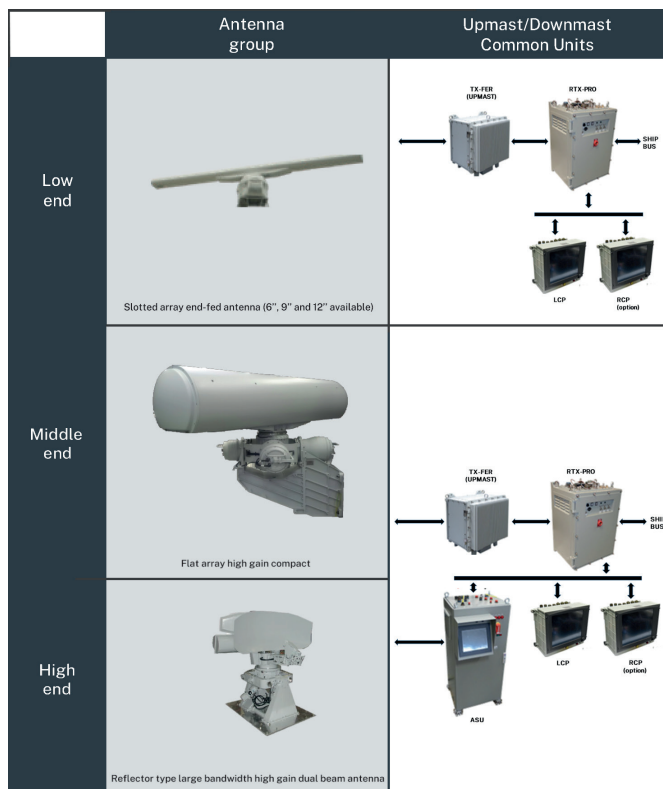
In-house designed and manufactured high MTBF solid state power amplifiers ensure an increased overall reliability and reduce routine maintenance requirements.

A smart BITE function guarantees quick and reliable malfunctions detection and accurate faulty item isolation down to LRU level while continuously monitoring radar performance.

## SYSTEM CONFIGURATION

Three versions (low, middle and high end) are available to ensure versatility and flexibility.

The main building blocks are common across the radar family to ensure logistic efficiency for the fleet, maximise the sharing of upgrades and new development for all customers.



## OPERATING MODE

Five different operating modes, specifically designed to respond to particular missions, are available for all radar versions and selectable by the operator.

Operating mode	Instrumented range (Nim)	Description
Air/Surface surveillance	≥54	Dual-channel processing to optimize performance in littoral warfare (over ground) or in heavy clutter conditions, as well as in the sea environment
Short-range	≥24	High-resolution and fast rotating, to track very small targets such as fast ships and aircraft in formation
Over-the-Horizon (OTH) surveillance	≥100	Optimised over-the-horizon performance in presence of anomalous propagation and to detect clutter free air target at very long distances
Weapon designation and anti-missile	≥15	Dual-channel mode to track very small and fast attack crafts and Sea skimmer missiles in heavy clutter conditions
Hight Resolution Navigation	≥6	Special waveform processing provides surveillance and navigation, while increased range resolution assists against very small/fast attack craft as well as buoys and floating mines

## FEATURES AND OPTIONS

The SPS-732 radar family can be tailored with add-ons to meet the most demanding requirements. Several options are available based on the chosen configuration.

	Low-end	Middle-end	High-end
LPI management	●	●	●
Zoom on window	●	●	●
Helicopter approach	○	●	●
Antenna stabilisation	—	●	●
Range profiling	—	○	●
Double-beam	—	—	●
IFF antenna	—	●	○

● Embedded    ○ Option    — Not available

### POWER MANAGEMENT

To reduce the transmitted peak power in several steps to obtain LPI features. Can also manage over the Azimuth scan with different power levels to fit to specific operation environment.

### ZOOM ON WINDOW

This function features very high range long range resolution enabling the discrimination of two or more very close tracked targets. It can be applied across every operating mode and at any distance.

### HELO APPROACH

Ability to control helicopter approach and landing on any naval vessels.

### RANGE PROFILING




The modern architecture and large instantaneous bandwidth provide the operator with Range Profiling on a selected target to allow Target Recognition.

### DOUBLE BEAM

Pencil beam to maximise performance in the Over-the-Horizon mode and Cosecant squared beam to guarantee air space coverage for low flying air targets.

## INSTALLATION PLATFORMS

The following table shows the naval platforms that can be typically equipped with our radars based on operational mission and tonnage.

Version	Low-end	Middle-end	High-end
<b>Platform</b>			
Fast Attack Craft	●	●	
Mine Hunters	●	●	
Patrol vessel	●	●	
Offshore Patrol Vessel		●	
Corvette		●	●
Frigate		●	●
Destroyer		●	●
Auxiliary	●	●	
Amphibious Dock		●	●
Aircraft Carrier		●	●

## INSTALLATION DATA

	COMMON UNITS			
	Width (mm)	Height (mm)	Dept (mm)	Weight (Kg)
TX-FER	475	500	390	45
RTX-PRO	450	625	400	37
LCP	613	442	330	24
ASU (middle-end)	700	1450	650	110
ASU (high-end)	640	1875	720	200
	ANTENNA GROUP			
	Swing circle (mm)	Height (mm)	Dept (mm)	Weight (Kg)
Low end 6"	1980	630	550	<56
Low end 9"	2795	630	550	<72
Low end 12"	3830	630	550	<74
Middle end	2500	1600	1200	<355 without IFF
High end	2400	2300	2000	<600



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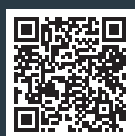
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