

MF-STAR

Multi-Function Digital AESA Radar
ELM-2248

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The MF-STAR (ELM-2248) is a digital AESA multi-function radar for the new generation of naval vessels. The radar system delivers high quality situation picture and weapon support, under severe target environmental conditions in the current and future naval arena. Incorporating advanced technology and robust system architecture, the MF-STAR employs multi-beam and pulse Doppler techniques as-well-as cutting edge ECCM techniques to extract low RCS targets from complex clutter and jamming environments. MF-STAR's basic TR element digital output enables software only adaptive beam forming and mode variations to form a software defined radar.

The MF-STAR antenna includes 4 scalable faces of active arrays in S-Band frequency.
These 4 faces can be installed in various configurations and in different sizes.

- 4 faces on a single mast
- 3 faces on a front mast and single face on aft
- 2 faces on 2 masts
- All around the vessel structure installation

The various installation configurations allows flexible adaptation to the specific vessel constraints. The hardware architecture and technology ensures high system availability, low maintenance and low life cycle cost. The MF-STAR incorporates a lightweight antenna that can be scaled to fit smaller ship sizes (corvettes and above).

OPERATIONAL CAPABILITIES

- Blue water and littoral warfare support
- Simultaneous multi-engagement support
- Active and semi active missile support
- 30 long-range air surveillance
- 30 medium range automatic threat alert
- Missile horizon search and threat alert
- Maritime surface surveillance
- Target classification (including helicopter)
- Gunnery control and splash spotting

FEATURES

- Fast threat alert response time
- Very high tracking update rate and accuracy for priority targets
- Short search frame/TWS revisit time
- Mid-course guidance of active/semi-active anti-air missiles
- Illuminator enslavement for semi-active missiles
- Automatic splash detection and measurement for gunnery support
- Instantaneous multi-beam
- Scalable, modular active solid-state phased array
- High reliability and high availability

PERFORMANCES AND PARAMETERS

Parameter	Corvette Version	Frigate Version
Instrumented Range	>250 Km	>450 Km
Azimuth coverage	360°	360°
Elevation coverage Weight	-20° to +85°	-20° to +85°
Above Deck	500 Kg per face	2000 Kg per face
Weight Below Deck	1300Kg	4000 Kg
Antenna size	lx2m	3x3m



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