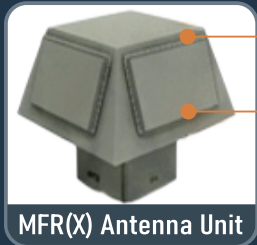


MULTI-FUNCTION RADAR (MFR-X)

Next-Generation Solution for Stealth Navy Ships



Four Phased Array Antenna (360° Coverage)
 GaN based Technology

MFR(X) Antenna Unit



KEY FEATURES OF MFR(X)

FREQUENCY OF OPERATION

- X Band

TECHNOLOGY

- GaN based Technology

INSTRUMENTED RANGE

- in TAWS Mode: ≥ 200 km
- in LRS Mode: 300 km

COVERAGE

- 360° azimuth (Four 90°)
- 0 to 70° Elevation

ELECTRONIC WARFARE

- Advanced ECCM capabilities

OVERALL ANTENNA WEIGHT: ~1.2 T

STABILISATION

- Electronically stabilised for Ship Roll and pitch.

RELIABILITY

Graceful Degradation due to distributed T/R Modules.

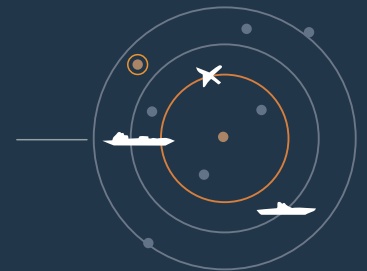
Distributed Design

CMS/WCS INTERFACE



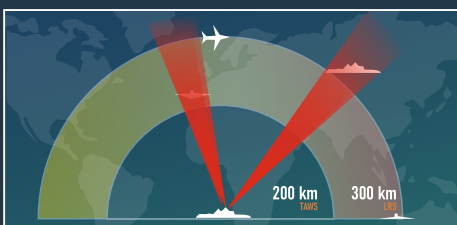
TRACKING

Automatic Acquisition & dedicated tracking (air and surface targets) enables effective SAM & Gun Control.



PRODUCT OVERVIEW

The Multi-Function Radar (MFR) is a cost effective and cutting-edge Naval RADAR system that utilises non-rotating active phased array technology. It is a four-wall configuration providing comprehensive 360° coverage in Azimuth and upto 70° in elevation, making it an ideal solution for surveillance, tracking and Missile guidance. The MFR can be interfaced with the Weapon Control System / Missile System and other external interfaces.




INDIAN NAVY'S STRATEGIC SHIFT TO ATMANIRBHAR: MFR(X)

Self-Reliant Defense Technology: The BEL and Naval Ecosystem

FROM IMPORTER TO SELF-RELIANT ARCHITECTS

BHARAT ELECTRONICS LIMITED (BEL): THE CRUCIAL ROLE

The Legacy Challenge: High Import Reliance



- Historical reliance on complex imported radar systems (up to 70%)
- Challenges:** Cost, Upgrades, Data Sovereignty, Logistics



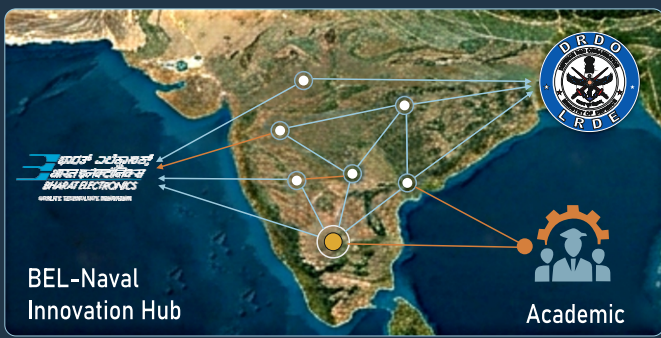

BEL State-of-the-Art Design & Production Facilities



The 'Make in India' Pivot: Strategic Self-Reliance




- Developing domestic capabilities for core systems
- Goal:** Indigenous Design, Manufacture, and Sustainance



Key National Outcomes

- Advanced Radar Control** (E.g., for Anti-Surface Warfare Corvettes)
- Complete Lifecycle Support & Sovereignty**
- Strategic Technology with Export Potential**
- Ecosystem for SMEs**

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