



# Airborne AESA Fire Control Radar

ELM-2052



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ELM-2052 is an advanced multi-mode, phased array, Pulse Doppler Fire Control Radar (FCR) designed for modern combat aircraft. The radar enables fighter pilots to attain air superiority, execute strike missions and achieve a high-level of multi-domain Situational Awareness. The radar is based on solid-state Active Electronically Scanned Array (AESA) technology with fast agile beam assignment. This enables the radar to detect and identify threats at long ranges, simultaneously track multiple air and surface targets, and execute multi-missions.

With longer range detection and richer image capturing, the radar provides the pilot with vital target classification data for intelligence gathering, real time surveillance and reconnaissance awareness, and facilitates optimal weapon deployment. The robust design, with inherent ECCM capability, is highly resilient to Electronic Countermeasures (ECM). Rugged, modular, and redundant solid-state configuration with no moving parts ensure the highest mission reliability and MTBF.

### Key Features

- Solid-state AESA technology
- Pulse Doppler, all aspect, look-down/shoot-down capabilities
- Simultaneous multi-mode operation, multi-target scanning, detection, tracking and engagement
- High ECM immunity and ECCM capabilities
- Modular hardware and software enabling growth potential
- High mission reliability (built-in redundancy)
- Intensive Built-in-Test

### The radar operates in the following modes:

- **Air-to-Air** - simultaneously scans, detects, tracks and engages single and multiple targets (MTT, AAST- All Aspect Search and Track, NAST - Nose Aspect Search & Track and ACM), performs high resolution target discrimination and acquisition, and raid assessment.
- **Air-to-Ground** - air-to-ground ranging (AGR), high resolution mapping (SAR Mode), Real Beam Mapping (RBM), GMTI & GMTT on RBM and SAR.
- **Air-to-Sea** - sea surface search, track multiple targets, Range Signature (RS), and ISAR sea target classification.
- **Flight Navigation** - radar provides weather awareness, terrain avoidance information and performs beacon interrogation.

### Specifications

The antenna is adapted to the aircraft's nose configuration, affecting the size, weight and power consumption:

Descriptions	Parameters
Frequencies	X-band
Weight	From 80-180 kg
Power	3-10 kVA

