



T-MMR

Tactical Multi-Mission AESA Radar
for Air Defense and Counter RAM
ELM-2138M



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The Tactical Multi-Mission Radar is a combat proven, 4D, tactical radar system used for Air Surveillance, Ground Based Air Defense (GBAD), Counter UAS (CUAS) and Counter Rocket, Artillery & Mortar (C-RAM) missions.

Designed for deployment from either high mobility tactical vehicle platforms in support of maneuvering forces, or fixed sites, the system detects, tracks and classifies a wide array of targets, including challenging low and high-speed aerial threats. The system generates a reliable, real-time, Aerial Situational Picture that is easily integrated with C2 and GBAD systems using various protocols.

The multi-mission versatility enable it to perform both land and maritime missions, including:

- Air surveillance
- Fire control
- Gap filler
- Weapon Locating Radar (WLR)

FEATURES

- A real multi-mission radar, simultaneously performs air defense & surveillance missions
- Software defined, 4D Active Electronically Scanning Array (AESA)
- Advanced resource management - dedicated track beams and high update rates for aerial target and hostile fire detection
- High mobility, rapid deployment, and On The Move (OTM) capability
- Advanced signal processing for mitigating heavily cluttered environments, target classification, low-altitude and low-velocity targets
- Unique technique for mitigation of multi-path effect.
- Advanced Electronic counter-countermeasures (ECCM) capabilities
- Modular design:
 - 1 to 4 panel configurations
 - 2 optional panel sizes for medium or long range mission performance
- Highly efficient Gallium-Nitride (GaN) RF modules
- Open Architecture for easy integration with C2 and GBAD systems
- Exceptional Size, Weight, Power and Cost (SWaP-C)

SPECIFICATIONS

Parameter	Medium Range Radar	Long Range Radar
Frequency band	S-Band	
Update rate	Up to 20 [Hz]	
Azimuth	90° per panel / 360° per 4 panels	
Elevation	Up to 90°	
Panel Size (WxH)	0.75 × 0.55 [m]	0.82 × 1.03 [m]
Panel Weight	67 [kg]	93 [kg]
Panel Power consumption @ 10 % D.C.	1100W	2200W
Target Detection Performance		
Nano UAS	12 [km]	20 [km]
Mini UAS	22 [km]	37 [km]
Medium UAS	45 [km]	80 [km]
Helicopter	80 [km]	140 [km]
Small Fighter	55 [km]	87 [km]
Fighter	75 [km]	125 [km]
Transport	90 [km]	150 [km]
Light Mortar	6 [km]	10 [km]
Heavy Mortar	9 [km]	15 [km]
Rocket	10 [km]	18 [km]
Medium Vessel	100 [km]	160 [km]

