

AESA50 MULTI-MISSION RADAR

The AESA50 system is capable of **simultaneously performing air surveillance and counterfire target acquisition (CTA) missions while stationary or on-the-move**

The AESA50 multi-mission radar is the next-generation of the proven AN/TPQ-50 radar, a U.S. Army Program of Record. It takes the innovative design features of the AN/TPQ-50 that make it so compact, rugged and flexible, and infuses active electronically scanned array (AESA) technology that delivers fully steerable radar beams. The result is a better performing radar that simultaneously performs air surveillance and CTA missions while on-the-move.

Coverage Improvements

The AESA50 system provides a configurable coverage volume with improved elevation, range and detection accuracy. It greatly reduces the “cone of silence” by steering the radar beams from -5 to 55 degrees in elevation. This allows for better detection and tracking of close-in, low, small and slow targets like unmanned aircraft systems (UAS). And it helps with the detection, tracking and locating of close-in weapon firings.

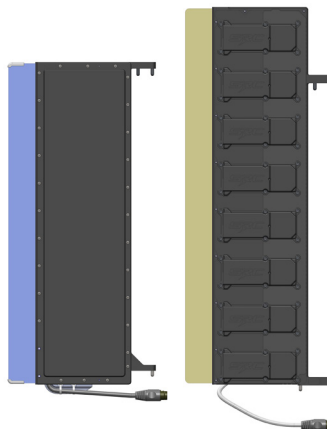
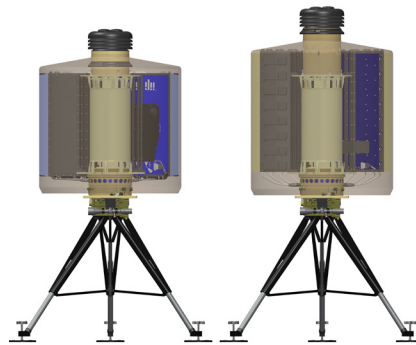
Flexible

The AESA50 multi-mission radar can be installed in a variety of configurations - on a vehicle, trailer, tower, rooftop, or as a standalone tripod-mounted system. It can also be remotely operated by an optional power generator. Additionally, the AESA50 radar can be set-up more quickly than previous versions due to its hot-swap capability, allowing the software to boot-up while components are being attached.

Rugged and Reliable

The system has been designed to meet strict U.S. military standards, including MIL-STD-461E, MIL-STD-464A and MIL-STD-810G. It features more than a hundred independent transmit/receive (T/R) modules, making it resilient to individual module failures. It offers a robust built-in-test (BIT) capability and hot-swap components, so that you won't need to power down the entire system to replace damaged parts in a critical situation.

IMPROVING UPON THE AN/TPQ-50, THE AESA50 SYSTEM GREATLY REDUCES THE “CONE OF SILENCE” AND IMPROVES DETECTION AND TRACKING OF CLOSE-IN TARGETS



The AESA50 Multi-Mission Radar is tripod and vehicle mountable to support multiple missions.

AESA50 MULTI-MISSION RADAR

APPLICATIONS

- Air surveillance
- CTA
- Short range air defense
- UAS sense and avoid
- Wind farm gap filler

BENEFITS

- Reduces costs by performing the tasks of two or more radars through just one multi-mission system
- Available as an upgrade kit for existing AN/TPQ-50 owners
- Easily integrates with existing hardware and infrastructure through customizable interfaces and installation options
- Requires minimal maintenance with BIT, hot-swap components and no moving parts

SPECIFICATIONS

- Operating frequency: L-Band
- Detection range:
 - 50 km (air surveillance mode)
 - 13 km (CTA mode)
- Azimuth coverage: 360° steerable
- Elevation coverage: 60° configurable
- System weight: < 295 kg / 650 lb
- System size (tripod mounted):
 - 1m / 3.5 ft diameter
 - 2m / 7 ft height
- Temperature range: -40°C to 50°C
- Power requirements:
 - 3,000 W
 - 110/240 VAC
 - 50-400 Hz

FEATURES

- Performs simultaneous air surveillance and CTA missions
- Operates while on-the-move
- Detects close-in, small and slow targets
- Provides 3-D target position
- Offers a customized coverage volume with electronically steerable radar beams, both in azimuth and elevation
- Hot-swap components
- Compatible with a variety of interfaces
 - ASTERIX
 - AFATDS FAAD C2
 - Multi-source correlator tracker
 - Custom interfaces
- Full integrated logistics support available
- Optional subsystems
 - Slew-to-cue electro-optical/infrared camera
 - Secondary surveillance radar
 - Satellite communications
 - Power generator
 - Tower, trailer or vehicle mount



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