

Provides critical air surveillance by automatically detecting, tracking, classifying, identifying, and reporting targets to air defense weapons systems and battlefield commanders.



DESCRIPTION AND SPECIFICATIONS

Sentinel is used with the Army's Forward Area Air Defense Command and Control (FAAD C2) system and provides key target data to Stinger-based weapon systems and battlefield commanders via FAAD C2 or directly, using an enhanced position location reporting system or the Single Channel Ground and Airborne Radio System.

Sentinel consists of the M1097A1 High Mobility Multipurpose Wheeled Vehicle (HMMWV), the antenna transceiver group mounted on a high mobility trailer, the identification friend-or-foe system, and the FAAD C2 interface. The sensor is an advanced three-dimensional battlefield X-band air defense phased-array radar with a range of 40 km.

Sentinel can operate day and night, in adverse weather conditions, and in battlefield environments of dust, smoke, aerosols, and enemy countermeasures. It provides 360-degree azimuth coverage for acquisition and tracking of targets (cruise missiles, unmanned aerial vehicles rotary and fixed-wing aircraft) moving at supersonic to hovering speeds and at positions from the nap of the earth to the maximum engagement altitude of short-range air defense weapons. Sentinel picks up targets before they can engage, thus improving air defense weapon reaction time and allowing engagement at optimum ranges. Sentinel's integrated friend-or-foe system reduces the potential for engagement of friendly aircraft.

Sentinel modernization efforts include enhanced target range and classification (ETRAC) upgrades to engage non line-of-sight targets; increased detection and acquisition range of cruise missiles, unmanned aerial vehicles and fixed/rotary wing targets; enhanced situational awareness; and classification cruise missiles. The system provides integrated air tracks with classification and recognition of platforms that give an integrated

air and cruise missile defense solution for the Air and Missile Defense System of Systems Increment 1 architecture and subsequent Increments.

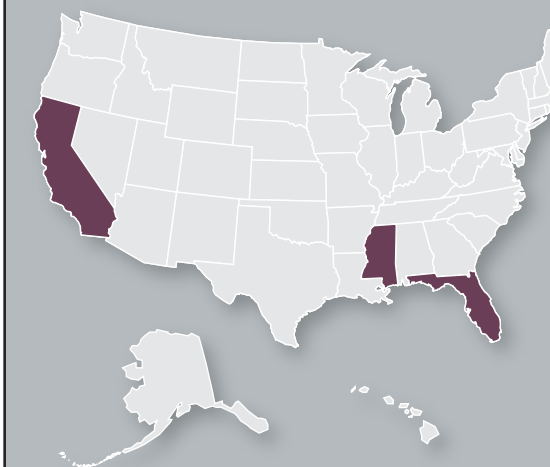
Sentinel has been critical in providing air surveillance of the National Capital Region and other areas as a part of ongoing homeland defense efforts.

PROGRAM STATUS

- **4QFY04** Exercised option for production of 67 ETRAC kits and associated integration into Sentinel radars

PROJECTED ACTIVITIES

- **3QFY05** Initial Sentinel ETRAC system retrofit of fielded system
- **4QFY05** Sentinel ETRAC initial operational capability (first unit equipped)



CONTRACTORS

Thales Raytheon Systems
(EL Segundo, CA; Forest, MS; Largo, FL)

INVESTMENT COMPONENT

Modernization

ACQUISITION PHASE

- Production and Deployment