

Sentinel

INVESTMENT COMPONENT

Modernization

Recapitalization

Maintenance

MISSION

Provides persistent surveillance and fire control quality data through external command and control platforms, enabling protection against cruise missiles, aircraft, unmanned aerial vehicles, and rocket, artillery, and mortar threats.

DESCRIPTION

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, the antenna transceiver group mounted on a high-mobility trailer, the identification friend-or-foe system (IFF), and the FAAD C2 interface. The sensor is an advanced three-dimensional battlefield X-band air defense phased-array radar with a 75-kilometer range instrumented range.

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 map of the earth to the maximum engagement altitude of short-range air defense weapons. Sentinel detects targets before they can engage, thus improving air defense weapon reaction time and allowing engagement at optimum ranges. Sentinel’s integrated IFF system reduces the potential for engagement of friendly aircraft.

Sentinel modernization efforts include enhanced target range and classification upgrades to engage non-line-of-sight targets; increased detection and acquisition range of targets; enhanced situational awareness; and classification of 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 provides critical air surveillance of the National Capital Region and other areas as part of ongoing homeland defense efforts, and is a component of the counter rocket, artillery, and mortar batteries in the area of responsibility.

SYSTEM INTERDEPENDENCIES

None

PROGRAM STATUS

- **4QFY10:** Delivery and installation of 14 Improved Sentinel Kits on radars

PROJECTED ACTIVITIES

- **4QFY11:** Contract award for 56 Improved Sentinels
- **2QFY12:** Contract award for 143 AN/TPX-57 IFFs
- **FY11-12:** Procurement of 31 Improved Sentinel Kits
- **FY13-14:** Fielding/Installation of Improved Sentinel Kits
- **4QFY12:** Delivery of Finland and Netherlands F1 Software

ACQUISITION PHASE

Technology Development

Engineering and Manufacturing Development

Production and Deployment

Operations and Support

Sentinel

FOREIGN MILITARY SALES

Egypt, Lithuania, Turkey

CONTRACTORS

Thales Raytheon Systems (Fullerton, CA;
El Paso, TX; Forest, MS; Largo, FL)
CAS Inc. (Huntsville, AL)

