Raytheon

Terminal High Altitude Area Defense (THAAD) Radar

THAAD provides proven, state-of-the-art, quality components for the newest generation of tactical missile defense.

Benefits

- Provides missile defense of critical and high value assets
- Employs kinetic energy, hit-to-kill interceptor to destroy targets
- Defends against asymmetric threats
- Provides high firepower and sustainability for resistance to mass attacks
- Offers interoperability with other Ballistic Missile Defense Systems

The Terminal High Altitude Area Defense (THAAD) System is an upper-tier element of the terminal portion of the Missile Defense Agency's Ballistic Missile Defense System. The higher altitude and regionwide protection furnished by the THAAD System in conjunction with the lower tier defenses, such as Patriot and sea-based missile defense systems, provide missile defense of critical and high value assets.

The THAAD program office is developing a complete, integrated weapon system consisting of launchers, missiles, fire control and communications, and radars. The THAAD missile employs kinetic energy, hit-to-kill, rather than an explosive warhead technology to destroy the target. The THAAD Radar is an X-band, phased array, solid-state radar. The radar design delivers high power output and exceptional beam/waveform agility in order to support the long range functional requirements of the THAAD mission. The THAAD components work in concert to detect, assign and destroy incoming short to medium and intermediate range ballistic missiles. Lockheed Martin is the prime contractor and systems integrator for the THAAD System. Raytheon provides the Radar and jointly develops the THAAD fire control and communications software with the prime contractor. It also delivers the FCC shelters and supports Weapon Systems Engineering and Test Engineering.

THAAD Fire Control and Communications shelters

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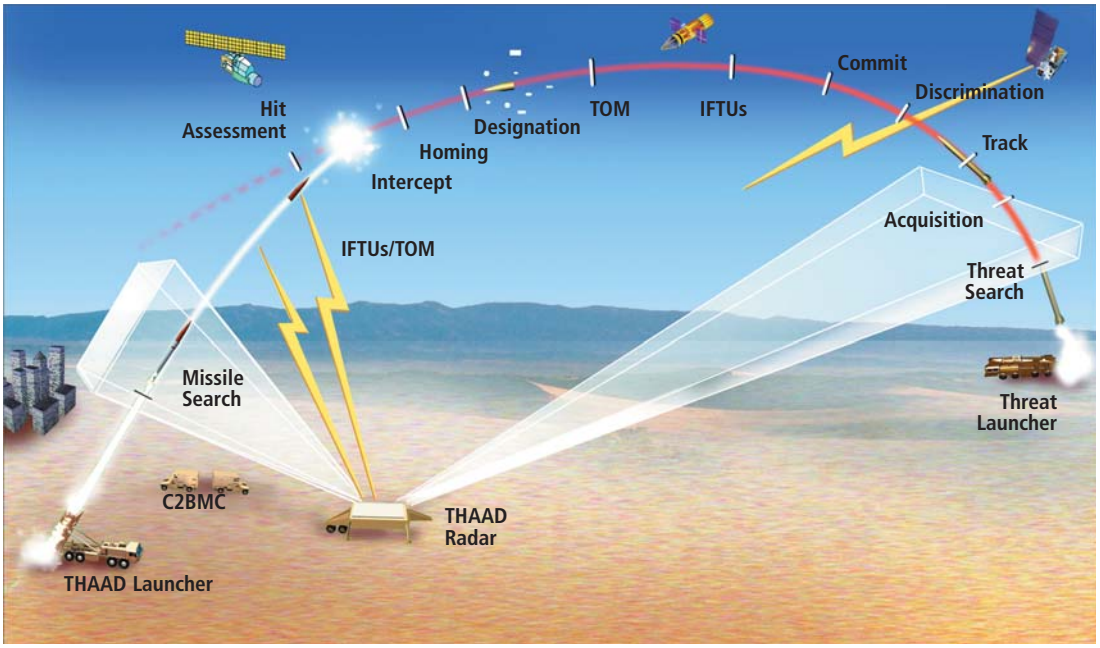
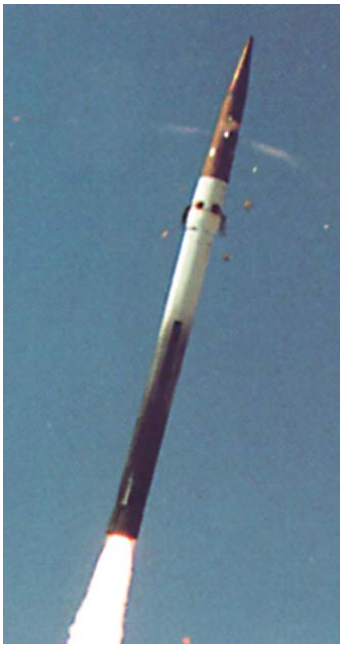


THAAD engagement concept of operation



THAAD missile

Status

The THAAD program is currently in development after having completed the previous phase's exit criteria and accomplishing back-to-back direct hit intercepts. Raytheon will deliver two radars and six Fire Control Tactical Shelter Groups for flight and system testing during this phase. This will provide incremental block capabilities as part of the evolving Ballistic Missile Defense System of systems.

Solid-State X-Band Phased Array Radar

- Antenna, electronics unit, cooling unit, diesel generator
- Surveillance for short range and medium range ballistic missiles
- Array populated with 25,344 X-band transmit/receive modules – 9.2 meter square aperture
- Transportable via C-5 and C-17 aircraft

Operational Concept

- Surveillance/detection
- Track
- Discrimination
- Hit assessment
- Cue lower tier

THAAD Radar emplaced for testing at White Sands Missile Range

Raytheon Company
Integrated Defense Systems
50 Apple Hill Drive
Tewksbury, Massachusetts
01876 USA

www.raytheon.com

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