



# THREAT DETECTION

**DETER  
DEFEND  
DEFEAT**



*Strategic Missions Center at Naval Surface Warfare Center, Crane Division (NSWC Crane) provides the Warfighter with a full range of capabilities and technologies to alter an adversary's will and ability to attack the U.S. and its interests.*

*Strategic Missions' focus on Threat Detection creates a trusted source for the critical, sensitive electronics and sensors required for global deterrence and ballistic missile defense.*

## SUPPORTING THE WARFIGHTER

Threat Detection supports the Warfighter by providing the means to detect and monitor threats to the U.S. and its interests. Strategic Missions experts provide the military with microwave design and engineering solutions that make radar surveillance possible.

Early detection of potential threats is essential to the security of the nation and provides a foundation for all military operations. Having the most accurate, advanced intelligence capabilities possible provides safety to our nation and helps guarantee the success of military operations in times of both peace and conflict.

Threat Detection enables constant surveillance of the environment, which includes countless applications from mobile and vehicle-mounted radar systems, to sea-based sonar systems and highly sophisticated satellites orbiting miles above the Earth's surface. Through these systems and technologies, NSWC Crane empowers the Warfighter to defend our homeland and defeat our enemies.

## PRODUCTS AND SUCCESS STORIES

Strategic Missions experts have supported the Missile Warning Space Surveillance (MWSS) program for the Air Force since 1997, offering technical expertise in engineering, reverse engineering, redesign, prototyping and limited manufacturing.



NSWC Crane is a world leader for sustainment and modernization solutions for several space and Command, Control, Communications and Intelligence (C3I) programs. Currently, NSWC Crane provides electronic equipment for the design, development and testing of programs and systems such as the Defense Meteorological Satellite Program and Space-Based Infrared System.

NSWC Crane provides support to the AEGIS Ballistic Missile Defense System developed to provide defense against ballistic missiles. It is part of the United States national missile defense strategy. Aegis BMD is designed to intercept ballistic missiles post-boost phase and prior to reentry.



As the Navy's Solid State Product Support Integrator for Radar and Electronic Warfare systems, NSWC Crane experts provide technical leadership on all solid state components and associated hardware in the AEGIS Weapon System.

NSWC Crane serves as the In-Service Engineering Agent and Acquisition Engineering Agent for Aegis Combat Systems radar microwave tubes. Aegis is the first fully integrated combat system built to defend against air, surface and subsurface threats, representing the Navy's most advanced surface combat system. Strategic Missions professionals are responsible for the sustainment of critical microwave components on both the Aegis SPY-1 and MK-666 radars. In addition to AEGIS BMD support, NSWC Crane radar expertise is responsible for radar restoration programs for the SPS-10, SPS-40, SPS-48, SPS-49, SPS-55 and SPS-67 for more than 40 surface combatant ships.



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## CUSTOMERS AND PARTNERS

NSWC Crane's Strategic Missions experts provide Threat Detection solutions for the U.S. Strategic Command, Navy Strategic Systems Programs, Defense Threat Reduction Agency, NASA and several other government agencies.

NSWC Crane also provides sustainment engineering for all Naval, global awareness and space surveillance radar sensors for the Department of Defense (DoD). NSWC Crane is responsible for multiple Navy, Marine, Army and Air Force radar sensors.

Partnerships within Threat Detection include the following organizations:

- *Missile Defense Agency*
- *Air Force*
- *Texas A&M University*

- *Raytheon*
- *Indiana University*
- *Lockheed Martin*

- *Purdue University*
- *Penn State University*
- *Vanderbilt University*

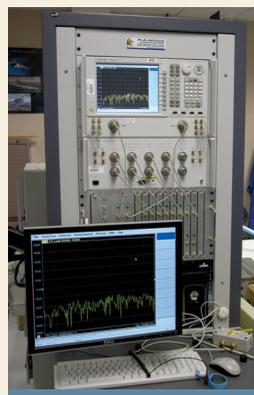
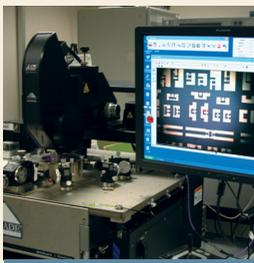
## LEADERSHIP, FACILITIES AND CAPABILITIES

NSWC Crane's experts harness the power of an electromagnetic wave and transform it into dependable technical solutions. The Strategic Missions Center is the Navy's only location where experts can perform radar repair and testing of high-power, solid state transmit/receive modules for emerging electronically scanned arrays.

NSWC Crane is a recognized leader, with unmatched knowledge and expertise in microwave tubes. Because of this leadership, NSWC Crane is designated the DoD's Executive Agent for Microwave Devices.

NSWC Crane facilities that support our Strategic Missions capabilities are:

- *DoD Microwave Tube Testing Lab*
- *Vacuum Process and Failure Analysis Lab*
- *Solid-State Component Test and Evaluation Facility*
- *Radar Test Range*
- *Comprehensive Antenna Analysis Facility*
- *Radar Systems Engineering Complex*



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