TTM Technologies
Time-To-Market Interconnect Solutions

AN/APS-153(V) Multi-Mode Radar

Premier Surveillance Radar for Maritime Helicopters

TTM Technologies designed and developed the AN/APS-153(V) to meet the demanding maritime performance requirements of the U.S. Navy MH-60R Multi-Mission Helicopter.

The AN/APS-153(V) meets the critical design challenges of the maritime military helicopter environment: rugged, lightweight, low-prime power, extremely small target detection, high-resolution imaging and long-range surface search.

The AN/APS-153(V) provides the MH-60R and its host ship with persistent littoral and maritime domain awareness. MH-60R capabilities support the following Carrier and Expeditionary Strike Group and U.S. Navy missions:

- Anti-Submarine Warfare (ASW)
- Anti-Surface Warfare (ASuW)
- C4ISR
- Surface surveillance
- Maritime interdiction
- Combat Search and Rescue/Search and Rescue (CSAR/SAR)
- MedEvac
- Logistical support
- Identification Friend or Foe (IFF)
- Battle damage assessment
- Naval surface fire support

Inverse Synthetic Aperture Radar (ISAR) Imaging

Imaging

Radar operators can classify detected moving ship targets under night and restricted visibility using the high-resolution Inverse Synthetic Aperture Radar (ISAR) mode. This mode allows the MH-60R to operate outside of visual and lethal range of a potential enemy and to identify detected targets when images are combined with other intelligence.

AN/APS-153(V) Multi-Mode Radar

Modes of Operation

- Long and short-range search
- ISAR imaging
- Small target/periscope detection
- Short-range SAR
- Navigation

Fully Integrated Mission System

The AN/APS-153(V) is fully integrated into the MH-60R Common Cockpit™ avionics suite by Lockheed Martin. The radar is controlled through the aircraft's mission computer with returns shown on 8 x 10 in. color multi-function displays, providing the crew with independent views of radar data.

IFF Interrogator

An IFF interrogator is integrated internally into the AN/APS-153(V) Weapons Replacement Assembly (WRA) saving valuable weight and space.

The IFF system provides Mark XII IFF modes 1, 2, 3A and 4 to identify friendly IFF-equipped platforms in the operating areas, giving the MH-60R flight crew positive situational awareness.

Shipboard Operations

The MH-60R, combined with the AN/APS-153(V), is designed to operate from helo-capable small combatants to the largest aircraft carriers as a key element in the helicopter-ship system. Via the aircraft's C-band data link, shipboard personnel have virtually the same radar picture as the flight crew. The radar will withstand the harshest maritime and helo-vibration environments.

U.S. Navy MH-60R Multi-Mission Helicopter

Potential Mode Enhancements

The AN/APS-153(V)'s signal processing provides the upgrade flexibility to meet the challenges of the future. New or enhanced modes of operation offering potential for improved situational awareness and mission effectiveness include:

- Low Probability of Intercept (LPI)
- ISAR automatic classification aids
- Synthetic Aperture Radar
- Mode 5/Mode S IFF
- Weather

Visit www.ttm.com for more information.