



The APS-143C(V)3/OceanEye™ is TTM's high performance maritime surveillance radar found onboard a wide array of fixed- and rotary-wing aircraft worldwide. OceanEye is lightweight and reliable, incorporating successful mission-critical features of earlier APS-143 versions with an integrated Identification Friend or Foe (IFF) interrogator.

## Open-Architecture Design

OceanEye's open-architecture design facilitates software and firmware updates and is the best choice for maritime tactical missions now and well into the future. OceanEye features a three-box system comprised of a Receiver/Transmitter (R/T), Signal Processor (SP) and Antenna/Pedestal (A/P).



Sikorsky S-70

## Mission Diversity

OceanEye's diverse mission areas make it a cost-effective radar for the following operational missions:

- Anti-Surface Warfare (ASuW)
- Small target detection
- Search and Rescue (SAR)
- Search and Rescue Transponder (SART) beacon detection
- Long-range maritime surveillance and classification
- Fisheries protection
- Coastal surveillance
- Contraband control and drug interdiction
- Border surveillance

# Maritime Surveillance, Imaging and Tracking Radar System



## System Specifications

|                         |  |   |
|-------------------------|--|---|
| System Weight:          | 190 lb./84.4 kg (with mounting trays)                                  |   |
| Box Size:               | R/T - 1.5 long ATR; SP 1.0 long ATR; various A/P pedestal options      |   |
| Power Required:         | 115 V, 400 Hz, 3-phase AC power, 1.8 kVA typical, and 28 V, 12 A       |   |
| Operating Modes:        | Standard:  | Search, weather, SART beacon, Small target detect, ISAR, range profiling and stripmap SAR |
|                         | Optional:  | IFF interrogator, AIS   |
|                         | Planned:   | Ground Moving Target Indicator (GMTI)   |
| Control Configurations: | 1553B data bus or standalone Tactical Display Management System (TDMS) |   |
| Other Features:         | Sector blanking, PRF jitter, frequency agility, low sidelobe antenna   |   |

## Performance

|                                  |   |
|----------------------------------|---|
| Maximum Range:                   | 200 NM  |
| Display Range Resolution:        | 0.01 NM (1 meter for imaging option)                      |
| Azimuth Accuracy:                | 0.5° or better  |
| Mean Time Before Failure:        | 800 hours for helicopters; 1,400 hours for fixed-wing A/P |
| Bandwidth:                       | 460 MHz   |
| Gain:                            | 31 to 35 dB (antenna/platform dependent)                  |
| Integrated IFF dipoles available |   |
| 360° scan                        |   |
| Sector Scan:                     | Operator selectable 45° to 350°                           |
| Stabilization:                   | Standard +10°/-25° pitch-and-roll (using antenna tilt)    |
| Flexible Mounting:               | Belly, nose, top  |

## Display and Processing

|   |   |
|---|---|
| Display Scales:   | 2, 4, 8, 16, 32, 64, 128, 256 NM                                |
| Clutter Processing:   | Scan-to-Scan integration  |
| Radar Monitor:  | Wide variety of options available to meet platform requirements |
| Standard Interfaces available to allow integration/operation with onboard display and control systems |   |
| MIL-STD-1553, ARINC 429/571/575, IEEE-802 Ethernet, RS-232/422 Serial I/O                             |   |
| Standalone consoles available using Telephonics' TDMS   |   |

## Advanced Radar Techniques

- Automatic detection and tracking with built-in global land mass rejection capability reduces operator workload in blue water and the littorals with low false alarm rates
- Frequency agile waveforms covering 460 MHz bandwidth enhances detection and reduces false returns
- High-range resolution with duty cycle pulse compression waveforms
- Synthetic Aperture Radar (SAR) and Inverse Synthetic Aperture Radar (ISAR) imaging modes
- Scan-to-scan integration
- Internally integrated IFF available
- Internally integrated Automatic Identification System (AIS) receivers



Indian Navy P-8I long-range, multi-mission maritime patrol aircraft.

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