

APS-143 OceanEye™



VENDOR DESCRIPTION

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Stationed around the world in over 25 countries, Telephonics' systems are on board helicopters, fixed-wing aircraft and aerostats. Telephonics' latest APS-143 version, OceanEye, represents the most advanced maritime radar technology available today and features:

- Inverse Synthetic Aperture Radar (ISAR)
- Spotlight and Stripmap SAR Imaging
- Range Profiling
- Oil Slick Detection (SLAR)
- Missile Targeting
- Low Probability of Intercept
- Automatic, Multiple Target Track-While-Scan
- Small Target Detection (<1m²)
- Moving Target Indicator (MTI) – Air-to-Air, Maritime and Ground
- Enhanced Frequency Agility
- Embedded Tactical Data Management System
- Integrated Internal IFF Option



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Business Category: Large Business

SARMTI

General System Description		
Standard System Components: Antenna/pedestal, receiver/transmitter, signal processor	Power Required: 115V, 400 Hz, 3-phase AC power, 1.8 kva typical, and 28v 12A	Operating modes: Return-to-ship, search, weather, ISAR, range profiling, SLAR, range zoom, stripmap SAR, spotlight SAR, Air-to-Air MTI and Maritime MTI
VME-based, open system architecture	System Weight: Typically 180lbs/82kg (1553-based model with ISAR/SAR imaging)	Box Size: R/T – 1.5 long ATR; S/P 1.0 long ATR; antenna-radome dependent
Control Configuration: 1553B data bus, stand-alone	Special Features: Sector blanking, PRF jitter, frequency agility	Integrated Internal Multi-mode IFF option including mode S and mode 5

Performance	Antenna	Display & Processing	Transmitter/Receiver
Detection: 1 sq. meter target beyond 30 nmi in sea state 3 from low altitude (typical)	Stabilization: ±30° pitch-and-roll using weight-saving antenna tilt technique	Radar monitor: 875-line high resolution TV display, 8" to 19" (20.3 to 48.3 cm) diagonal color or monochrome (RS-343A)/VGA/XGA/SVGA/RS170/CCIR601/STANAG A, B & C)	<ul style="list-style-type: none"> • Pulse Width: 0.1 to 50 usec • 46 frequency channels • PRF: Multiple PRF • Helix TWT type
Maximum Range: In excess of 200 nmi	Bandwidth: 500 MHz	<ul style="list-style-type: none"> • Scan-to-Scan Integration • Off-center to 5 radii 	Frequency: 9.25 to 9.70 GHz; 450 MHz agility
Display Range Resolution: 0.01 nmi (1 meter for imaging)	Gain: 31 to 35 dB (antenna dependent)	<ul style="list-style-type: none"> • Ground Reference Stabilization: Over 5 radii of offset • Track-While-Scan with automatic Track initiate 	Peak Power: 8kW min. Average Power: 260 W nominal (500 W max.)
Search radar range resolution of 7.5 ft	Polarization: Horizontal (vertical optional)	Display Scales: 2, 4, 8, 16, 32, 64, 128, 256 nmi	Waveform Generation: Digitally synthesized
Azimuth Accuracy: 0.5° or better	Sector scan: 45° to 350° or continuous 360° scan (operator selectable)	Clutter Processing: 2-parameter CFAR with spike detection, sweep integration, m of n Scan Integration	Weighted Compressed Pulse Width: 15 and 100 nsec (search modes)
Reliability: 800 hour MTBF for helicopters; 1400 hour MTBF for fixed-wing	Corporate fed planar array to fit any size radome or requirement	Display Formats: 400 x 400 4-bit grayscale for radar video and 540 x 400 with overlay graphics (1280 x 1024 and 8-bit color available)	Receiver: Dual conversion, fully coherent selectable STC
	<ul style="list-style-type: none"> • Searchlight for ISAR/SAR and ESM antenna steering • Integrated IFF dipoles available • Radomes available 	Standalone consoles available with 21" LCD color display and optional LCD cockpit monitor; includes map overlays, extra windows for simultaneous FLIR, ESM and/or live video/still camera display	<ul style="list-style-type: none"> • Receiver Noise Figure: 2.5 dB max • AGC controls receiver gain over temperature
		Standard interfaces available to allow integration/operation with onboard display and control systems on larger MPA (C-295, C-130, Do-228, P-3, etc.)	<ul style="list-style-type: none"> • Bandwidth: Matched to pulse width • Processing: STC at RF under operator control
		Range scales: 25, 50, 100, 200 nmi	