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TRACKING NO.	SLS-406
PROGRAM	OSPREY
CATEGORY	Sensors & Payloads
FISCAL YEAR	FY2025
CONTRACT AWARD	26 JUN 2025

CAPABILITY BRIEF

APERTURE

SLS-PROPRIETARY

Mast-Mounted EO/IR Sensor

Aperture is the mast-mounted EO/IR sensor — the silent eyes of the surface fleet. OSPREY provides 360° panoramic electro-optical and infrared coverage with passive automatic detection and tracking, letting a USV build situational awareness in an emissions-controlled, radar-silent posture.

KEY CAPABILITIES

- 360° panoramic EO/IR suite with persistent passive detect-and-track.
- High-resolution MWIR cameras (nBn-class detectors) for night and obscured scenes.
- GPU-accelerated, highly-parallel automatic target detection and cueing.
- Horizon detection and small-contact discrimination in clutter and sea spray.
- Emissions-controlled (EMCON) operation with no emitted signature.
- Cues ORCA (SLS-104) intercepts and feeds ALDER (SLS-305) tracks.

PLATFORM AT A GLANCE

360°
COVERAGE
EO + MWIR
BANDS
Passive
MODE
Automatic
DETECTION

PAYLOAD PROFILE

SENSORS	EO (visible) + MWIR	COVERAGE	360° panoramic
DETECTOR	nBn strained-layer superlattice	RESOLUTION	25 MP MWIR
STABILIZATION	Gyro-stabilized	PROCESSING	GPU ATD / ATR
DETECTION	Passive auto detect-track	RANGE	Horizon-limited
CUEING	Slew-to-cue	MOUNT	Retractable mast
POWER	< 180 W	INTERFACE	CEDAR / ALDER
OUTPUT	Tracks + imagery	EMCON	Full passive
HOSTS	HERON, ORCA	ENVIRONMENT	Marine-hardened

CONCEPT OF EMPLOYMENT

OSPREY is the fleet's silent eyes — detecting and tracking contacts passively under EMCON, discriminating small targets in sea clutter, and slewing to cue while feeding tracks and imagery to ALDER (SLS-305). Mounted on HERON (SLS-101), it sustains situational awareness without revealing the platform's presence.