ViDAR

Visual Detection and Ranging

Wide-area maritime search and surveillance with high-resolution imagery

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UNMANNED AIRCRAFT SYSTEMS

ViDAR is an airborne wide-area maritime search payload that pairs automated target detection with high-resolution identification, empowering operators to find elusive objects over vast areas that other search methods often miss.

KEY BENEFITS & FEATURES

Wide-area search and surveillance

- Delivers autonomous wide-area maritime search and surveillance at an unprecedented small Size, Weight and Power (SWaP)
- Search a 20-nm-wide swath of water and detect objects that traditional maritime search sensors often miss, such as low-profile semi-submersibles, marine mammals, and humans.

Demonstrated daytime capabilities

- Search area of approximately 13,360 nm^2 in 12 hours
- Target and distance detection of a person in the water from >1.7 nm to a single deck car ferry from >30 nm
- Detects targets not detected by traditional radar
- Proven to detect 98% of targets ranging from a person in the water to large ships

Automated target detection

- Pairs a scanning search camera with a high-resolution nose turret for automatic detection, cataloging and selective cross cueing
- Uses a modular payload sensor suite and onboard image processing to detect and positively identify maritime targets

Quick actionable intelligence

- Distinguishes between water and objects, making it easier for the operator to rapidly locate, track, and catalog multiple objects of interest for map location overlays, tracking and target interrogation.
- Autonomously ranked to increase human operator performance
- Unlimited multi-target tracking and geo-location
- Cross correlation with AIS targeting

1.3 MILLION FLIGHT HOURS | **50 GLOBAL SITES OF OPERATION** | **MODULAR FAMILY OF SYSTEMS** | **SERVICES, ACQUISITION AND FMS**

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Rapidly locate, track, and catalog multiple objects of interest

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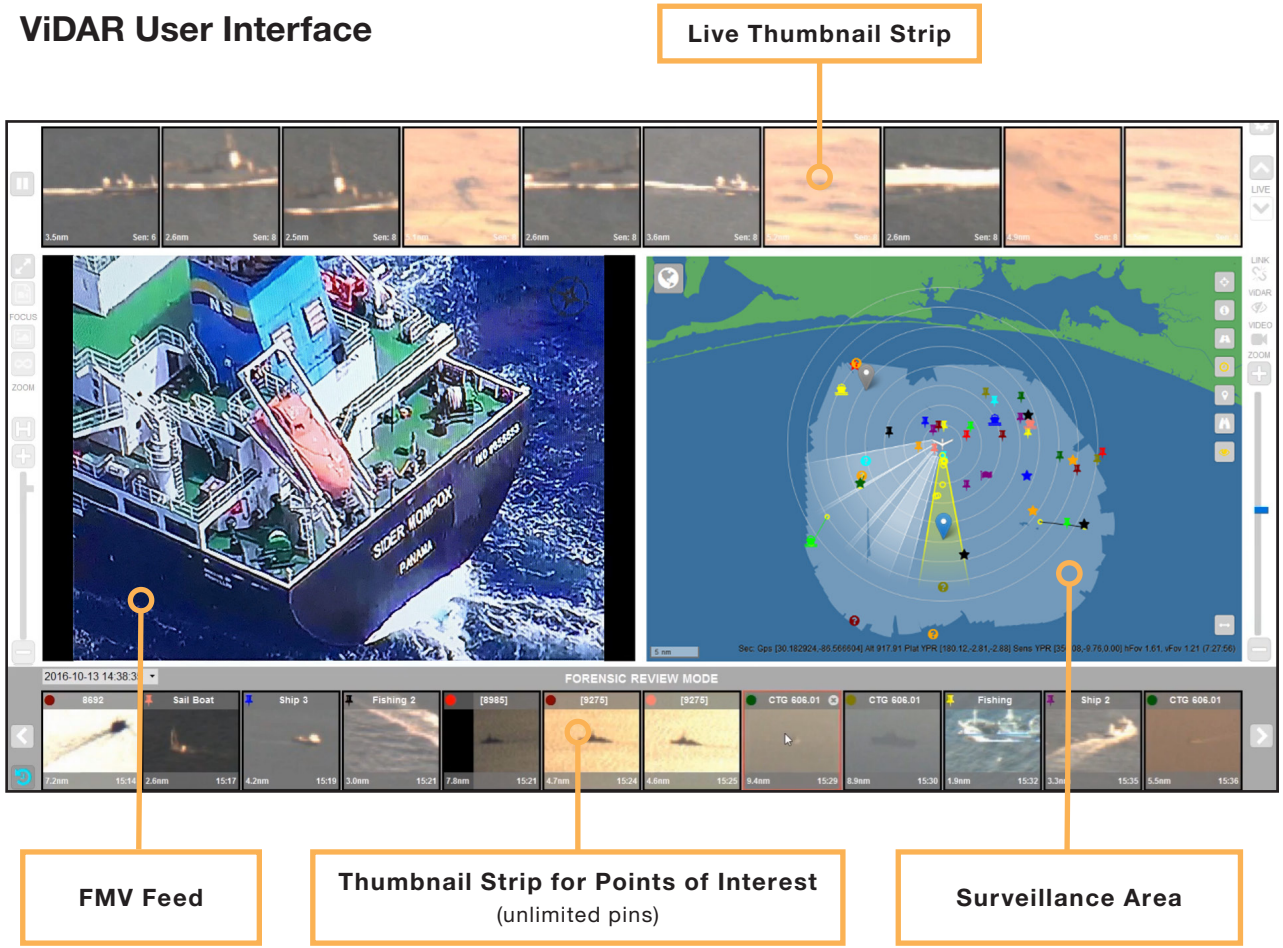
SPECIFICATIONS

ViDAR User Interface



VIDAR TURRET

- Scan type: Five Increment Step Stare
- Angular coverage: 180° *FOR limits and FOV scan rate are configurable to support mission flexibility

EO TURRET

- Wavelength: 400–900 nm
- Pixels: 1280 x 720
- Tilt: 30° Up, 90° Down
- Pan: 360° (Endless)
- Slew rate: 50°/Sec
- Performance @ 1 Hz and 2 Hz: 59 dB attenuation
- Power supply range: 12.6–14.4 VDC, 16 with nominal, 17.5 with peak

DEMONSTRATED DAYTIME DETECTION CAPABILITIES

- Person in water: >1.7 nm
- Six-person raft: >3.5 nm
- 20’ fast boat: >9.1 nm
- 40’ fast boat: >17.5 nm
- Single deck car ferry: >30 nm

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