SEAFLIR® 240-EP

HD Multi-Spectral Surveillance System

APPLICATIONS

- UNMANNED SURFACE VESSEL (USV)
- SPECIAL OPERATIONS FORCES (SOF)
- LAW ENFORCEMENT OPERATIONS
- SITUATIONAL AWARENESS
- ISR
- TARGET ACQUISITION
- SEARCH & RESCUE MISSIONS



The SeaFLIR 240-EP is the latest addition to the SeaFLIR family of maritime surveillance sensors. Containing the same lightweight stabilized turret, HD payload options and inertial navigation capabilities as the SeaFLIR 240, plus Extensible Processing (EP) capabilities hosted by the system's Control Electronics Unit (CEU).

The system's CEU supports advanced image-processing like blending, Multi-Spectral Dynamic Imaging (MSX®), Adaptive Temporal Filtering (ATF) and Advanced Local Area Processing (ALAP) via a high-performance computing engine and dedicated graphics processor unit (GPU). The CEU provides up to 4 paired HDMI and HD-SDI video outputs, remote system command, and a 1 Terabyte Solid-State Drive for capturing video and images for post mission analysis.

The sensors, optics, and image processing capabilities ensure best in class range performance for Detection, Recognition and Identification. Combined with the scalable control electronics' ability to support Aided Target Recognition (AiTR) via the Neural Network Target Classifier (NNTC), the system can drastically improve Special Ops surveillance, threat detection and general situational awareness.

FEATURES

MULTI-SENSOR CAPABILITIES

HD Thermal, HD Daylight and HD Low Light camera options. Eye-safe Laser Range Finder and Laser Pointer.

EXTENSIBLE PROCESSING (EP) CONTROL ELECTRONICS UNIT (CEU)

Additional Video Output and Communication Interfaces. Optional high-performance computing engine (CPU), dedicated graphics processor (GPU) and DVR capabilities with a 1 Terabyte Solid State Drive DVR. CPU and GPU can support Artificial Intelligence solutions and 3rd party software algorithms.

SUPERIOR IMAGE CLARITY

Multi- Spectral Dynamic Imaging (MSX) edge detail from color overlay on IR. Adaptive Temporal Filtering (ATF) reduction of high frequency temporal noise. Advanced Local Area Processing (ALAP) optimized IR in color or low contrast environment. Blending of IR and EO imagery.

BEST IN CLASS DETECTION, RECOGNITION AND IDENTIFICATION (DRI)

Superior range performance delivers best in class target recognition. Advanced Video Tracking keeps system locked on target. Optional built-in IMU delivers superior stabilized imagery and target location accuracy.

TELEDYNE FLIR

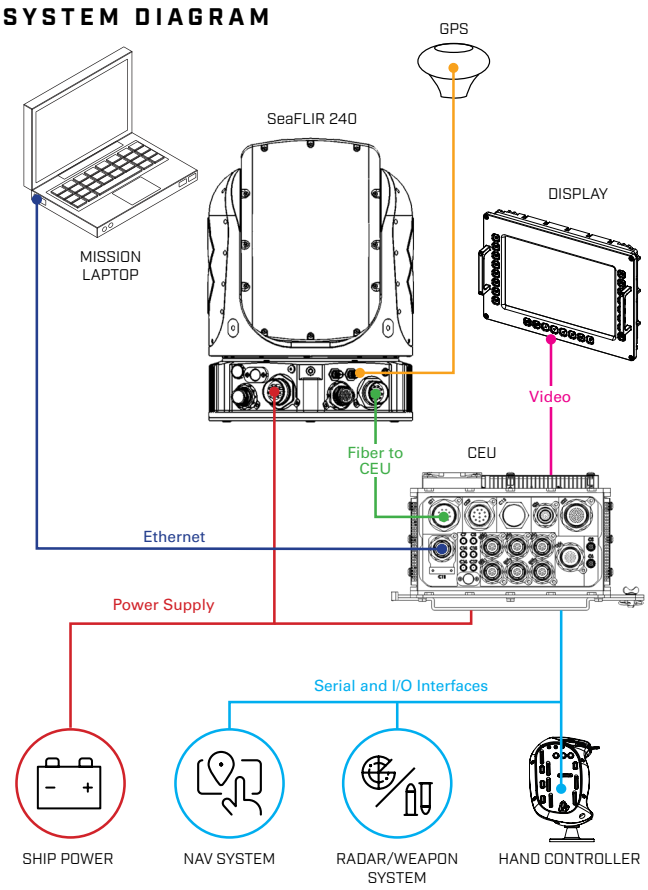
SPECIFICATIONS

THERMAL PAYLOAD	
Sensor type	HD MWIR 1280 x 720 FPA
Wavelength	3-5 µm
FOVs - nominal	Optical: 31.7° to 1.78° / 18x continuous zoom (4x digital)
VISIBLE PAYLOADS	
Daylight Sensor type	HD 1/2.5" CMOS
FOVs - nominal	Optical: 38.4° to 2.1° / 20x continuous zoom
LASER PAYLOADS (OPTIONAL)	
Rangefinder	Max range: 25km (15km variant available) Eye safe, Class 1 Laser product
Pointer	Power: 150 mW / 852 nm, Invisible, Class 3B Laser product
SYSTEM INTERFACES	
Video Outputs	HDMI or HD-SDI: Up to 4 pairs (2 x standard) Analog: Up to 4 pair (2 x standard)
Digital video format	1080p / SMPTE 292M, H.264 or NTSC/PAL (output dependent)
Communications	Serial: 7x RS-232 / RS-422 (configurable) CAN: 1x NMEA2000 Ethernet: 1x 1.0 Gigabit Specialty: MIL-STD-1553, ARINC 429
GPS Antenna	2 x TNC connectors
Controllers	Hand Controller Unit (HCU), Remote Control Unit (RCU)
Display (Optional)	15.6" FHD (1920x1200) display suited for harsh maritime environment
ADVANCED COMPUTING AND IMAGE CAPTURE & PROCESSING	
Vision Processor - COTS COM Express Type 6 form factor (Optional)	
Dedicated Graphics Processing Unit (Optional)	
1 TB removable hard drive for video storage (still and motion) (Optional)	
Multi-Spectral Dynamic Imaging (MSX) edge detail from color overlay on IR	
Adaptive Temporal Filtering (ATF) reduction of high frequency temporal noise	
Advanced Local Area Processing (ALAP) optimized IR in color or low contrast environment	
OPERATION MODES & IMAGE PERFORMANCE FEATURES	
Auto-scan	Pattern scan defined by operator
Track Mode	Video tracker locks onto defined target
Position Mode	TFU pointed to user defined LOS
Heading Mode	Maintain LOS azimuth, stabilized elevation
Radar Bearing Handoff	Accepts position data from RADAR system
Split Screen	IR & EO side by side cropped vertically or horizontally
ENVIRONMENTAL	
Standards	MIL-STD-810G (Shipboard), MIL-STD-461
Operating temperature	-40°C to 55°C
Storage temperature	-40°C to 71°C

POWER REQUIREMENTS	
Voltage	20 – 32 VDC (per MIL-STD-704E)
Consumption (steady state)	TFU - 220 W typ., 500 W max (excluding anti-icing) CEU – 295 W typ., 370 W max (CPU/GPU model)
CEU Consumption (w/GPU)	12A nominal / 15A peak
DIMENSIONS & WEIGHT	
TFU size	11.0"(d) x 15.35"(h) (280 x 390 mm) cylindrical volume
TFU weight	</= 44.0 lbs (20.0 kg) (varies based on payloads)
CEU size	12.3"(w) x 14.6"(d) x 7.3"(h) (312 x 371 x 185 mm)
CEU weight	</= 31 lbs (14.1kg) (varies based on payloads)



SYSTEM DIAGRAM



AMERICAS

27700 SW Parkway Ave
Wilsonville, OR 97070

EUROPE

2 Kings Hill Avenue - Kings Hill
West Malling, Kent ME19 4AQ
United Kingdom

Antennvägen 6,
PO Box 737
SE-187 66 Täby
Sweden

MIDDLE EAST

Wadi Al Fey St.
Building 60, Office # 302
New Ministries Exit /
Khalifa Park Area
Abu Dhabi, U.A.E.

Office 127, First Floor
Akaria Plaza Building, Olaya Street
Riyadh, 11481, Saudi Arabia

ASIA

Meguro Tokyu Bldg. 5F,
2-13-17
Kami-Osaki, Shinagawa-ku.
Tokyo, 141-0021, Japan

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