FLIR®

MARITIME SURVEILLANCE & TARGETING SOLUTIONS

MULTI-SPECTRAL IMAGING FOR EVERY MARITIME MISSION

MADE FOR THE MISSION

Welcome to the world's most challenging operational conditions: the maritime environment.

FLIR's range of maritime imaging products give your crews a crucial performance edge in an arena which is rarely benign and always dynamic, corrosive on equipment and harsh on operators, easy to access yet difficult to patrol, environmentally difficult, but requires 24 hour/365 day capability.

FLIR Systems has been a world leader in the design and manufacturing of 'multi-sensor' stabilized imaging systems for over 40 years. We have more systems in operation, on more platforms and in more nations than anyone else. With over 5,500 stabilized systems in operation in over 80 nations 'our customers are our credentials'.

We take pride in knowing our equipment saves lives so you can be confident that if your surveillance task turns into a live SAR, your FLIR product was "made for the mission."

YOUR REQUIREMENTS	MISSION READY
Mil-Std qualification	●
Marinised construction	●
2 to 6 axis stabilized	●
Class-leading DRI	●
Multi-spectral imaging	●
Radar and mission system integration	●

KEY INSTALLATION

U.S. COAST GUARD SIRVSS PROGRAM

The U.S. Coast Guard operates large numbers of FLIR systems on a variety of platforms including this 87-foot, Marine Protector Class, patrol boat. Onboard is the stabilized SIRVSS sensor system (from FLIR's TALON family) - an industry first for compact gimbals - ready to support operations with maritime-proven hardening.

LITTORAL OPERATIONS
FLIR'S COMPACT SYSTEM CAPABILITIES

MEDIUM RANGE SURVEILLANCE

FLIR offers a comprehensive range of medium range compact systems that are well suited for use in high speed patrol vessels. FLIR pioneered the 'small ball' gimbal with the SeaFLIR II, which allowed minor warships and police/Coast Guard patrol boats to provide a full 24-hour surveillance capability for the first time. The SeaFLIR 230 and TALON ranges are designed to be operable single-handed to help crews in the roughest conditions, and to maximize the performance of vessels with small crews. These small-ball systems provide very significantly increased capability for detection and target identification in harsh maritime environments. When integrated with other technologies like radar, Automatic Identification Systems, Electronic Chart Displays/chart-plotters, ESM and search lights, FLIR's small ball range offers a fully integrated approach for today's special forces, naval and para-military vessels.

KEY FEATURES:

- Compact and lightweight
- 1 and 2 LRU system options to cope with all requirements
- Fully stabilized
- Multiple payload systems for both sensors and lasers (up to 7 in a 9" diameter ball)
- Integrated to navigation and command systems
- Qualified and ruggedized to mil-spec standards

KEY APPLICATIONS:

- Special operations high speed interceptors
- Customs and policing interdiction activities
- EEZ protection
- Environmental monitoring
- Counter piracy/narcotics interdiction

KEY INSTALLATION

FT. KNOX
SPECIAL BOAT TEAM 22

Special Warfare Combatant-Craft crewmen from Special Boat Team 22 conduct live-fire immediate action drills at the riverine training range at Ft. Knox. SBT-22 operates the special operations craft-riverine, and is only U.S. special operations command dedicated to operating in the riverine environment.

KEY INSTALLATION

FS L'ADROIT
TALON PROGRAM

The French Navy has recently took delivery of the first of the new Gowind class of Offshore Patrol Vessels from DCNS in May 2012. At 87m and 1,450 tons, it's lean-manned crew makes full use of the TALON integrated into its Polaris Combat Management System to identify vessels at long range 24 hours per day during EEZ and fishery patrol duties.

BLUE WATER OPERATIONS
LONG RANGE SURVEILLANCE

A SINGLE SENSOR FOR MULTIPLE MISSIONS

FLIR maritime systems provide the highest level of long-range surveillance and target identification in the world. Whether used for drug interdiction, anti-piracy or border protection your mission benefits from multiple sensors, state-of-the-art technology and rigorous packaging discipline.

KEY FEATURES:

- Native HD cameras - visible, IR, low light
- Super wide FOV
- Single and twin LRU options
- Full 1080p digital resolution
- Embedded metadata
- Continuous zoom on all imagers
- Up to 120x zoom ratio
- Multiple laser payloads
- Full hardened for military maritime operations

KEY APPLICATIONS:

- Long range surveillance
- Search & Rescue
- Passive IR/EO search & track
- Gun and missile fire control
- Maritime force protection

SEARCH & RESCUE

SAVING LIVES

With thermal imaging technology capable of seeing minute temperature differences, our sensors make finding people in the water hugely more successful than just searching with visible spectrum devices.

Our geo-point and geo-location functionality provides automatic location of victims with pin-point accuracy, and can be linked to ship's command system to provide a 'man overboard' automatic tracking function. The auto scan functions allow the search to be automated to reduce crew fatigue and workload. Capable of feeding video into advanced automatic victim location finding software, FLIR maritime sensors provide the ultimate front end to any state-of-the-art SAR system.

PILOTAGE

NAVIGATION

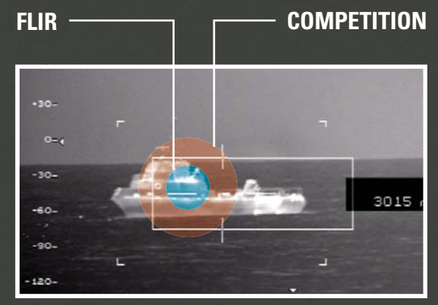
FLIR stabilized imaging systems provide eyes in the night that see objects in low light and objects that emit low levels of heat. Using advanced image processing and blending functions present a total scene that is more useful than a single camera image by itself.

Complete darkness or very weak moonlight is no problem for a vessel with our systems monitoring the scene for you. With a FLIR maritime system installed on your vessel, you'll have every advantage that modern technology can bring to night-time or inclement weather maritime operations.

TARGETING SOLUTIONS

LASER DESIGNATORS & AND FIRE CONTROL SYSTEMS

Laser guided weapons offer a higher probability of a direct hit, even against small fast moving targets. FLIR's fully NATO PIM compatible Laser Designator equipped EO/IR systems can exploit for maximum effectiveness.



FIRE CONTROL

Fire control is a key aspect of military sensors and can mean conventional targeting for kinetic weapons, surrogate sighting for remote weapon systems with their own limited fire control systems, or laser designation for weapons systems employing laser guided munitions.

FLIR's compact maritime gimbals provide conventional targeting and surrogate sight capabilities for your missions. Our larger gimbals provide maritime laser designation capability as well.

FULLY INTEGRATED ISTAR FOR WEAPON DIRECTION

All FLIR's gimbals are designed to be able to support weapon direction for small remote mounted weapon systems, all the way up to large calibre guns that provide the main offensive armament for many frigates.

Using high PRF laser range finders, exceptional angular pointing accuracy, and very accurate positional information, FLIR's al HD SeaFLIR 260 and SeaFLIR 380 ranges provide the perfect long range electro-optical solution for your ship's main weapons.

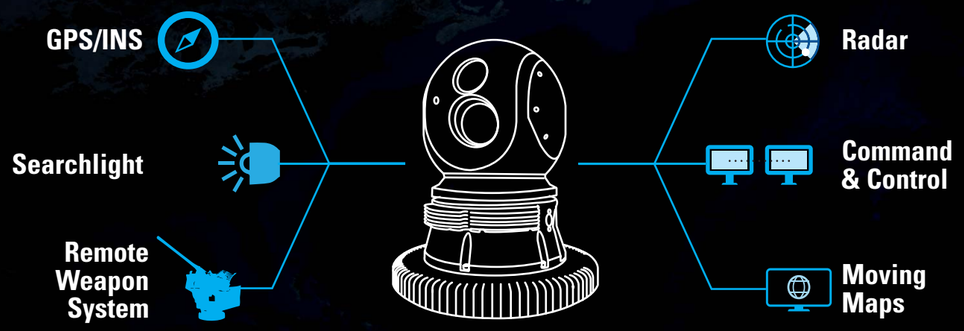
KEY INSTALLATION

USS OSCAR AUSTIN
SPS PROGRAM

FLIR's SeaStar SAFIRE III installed under the Navy's Shipboard Protection System program to protect Navy vessels from asymmetric threats. The Oscar Austin is the first U.S. Navy Aegis Flight IIA guided missile destroyer.

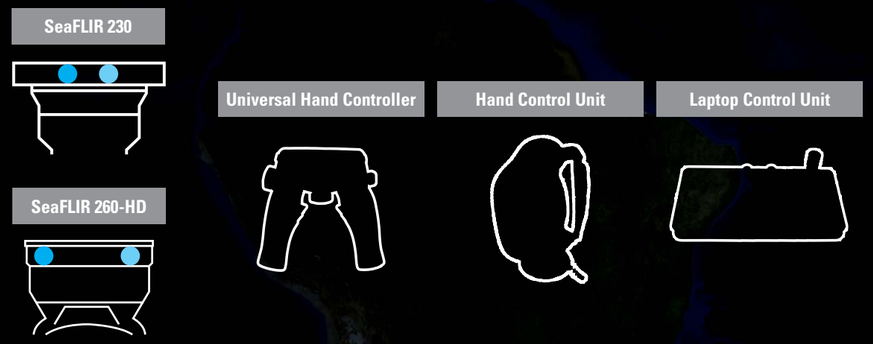
INTEGRATION

FLIR sensors provide increased capability and communications to: command/control system, GPS, INS, Radar, Moving Map, Searchlight, AIS and more.



COMMERCIALLY AVAILABLE CONNECTORS & WIRING

The common connectors and wiring are all commercially available items, i.e. MIL-D-38999 Series III connectors, and common vessel standard wiring loom materials.



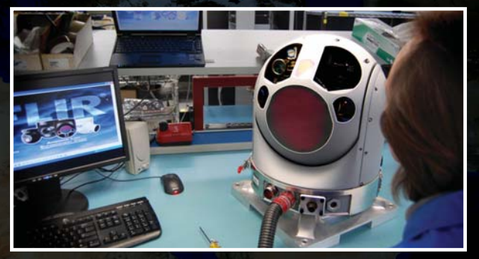
FLIR MARITIME INTERCONNECT

Besides using industry standard marinised connectors and wiring, FLIR transcends typical installation via the use of stainless steel and hermitic connectors, dry desiccant features, and factory purge processes. The results are outstanding lifetime and weather proof installations that allow these sensors to survive in harsh maritime environments.

SERVICE AND SUPPORT

CUSTOMER SERVICE SOLUTIONS

FLIR's regional service centers across the globe minimize shipment delays on repairs and maintenance. FLIR also offers extended warranty programs and service maintenance Agreements to ensure that our customers get the greatest use of your system. Our highly experienced engineers are available to deploy world wide to support our customers' ships, vessels, and harbour facilities, enabling fast and effective installation, integration, fault finding, training and equipment upgrades.



OUR CUSTOMERS ARE OUR CREDENTIALS

Securing freedom of the seas is not an easy job; FLIR knows that once you have left the harbour wall, crews have to be able to rely on our EO systems to perform. That's why our imagers have some of the longest meantime between failure rates of any EO/IR systems on the market.

Failed hardware causes mission failures and lost lives. Distant, centralized support results in higher spare level costs and failed missions from unavailable hardware. FLIR's worldwide network of service centers provides rapid response to repair needs, thereby increasing your operational availability rates and chances for a successful mission.

MARITIME PRODUCT FEATURES

LONG RANGE

LASER DESIGNATION

PRODUCT	HD	SD	EO	MWIR	SWIR	LD	LRF	LI/LP	GPS	EO Continuous	IR Continuous	Single LRU	Common Interface	Common Cables
SEAFLIR 380-HLD The world's first and only all-digital, full High Definition system with Laser Designation. With a wide variety of laser payloads, including a NATO PIM coded laser designator, this is the world's highest performance maritime gimbal. 	●	●	●	●	●	●	●	●	●	●		●	●	●
BRITE STAR II With a 100% duty cycle and diode-pumped laser rangefinder/designator, the BRITE Star II's range performance, sensor combination, and program record make it the low-risk choice for reliable, long range target designation. 		●	●	●		●	●	●	●	●				
SEAFLIR 380-HD The all-digital, full high definition SeaFLIR 380-HD provides superior image stabilization, ultra long range imaging performance, and true metadata embedded in digital video. 	●	●	●	●	●		●	●	●	●		●	●	●

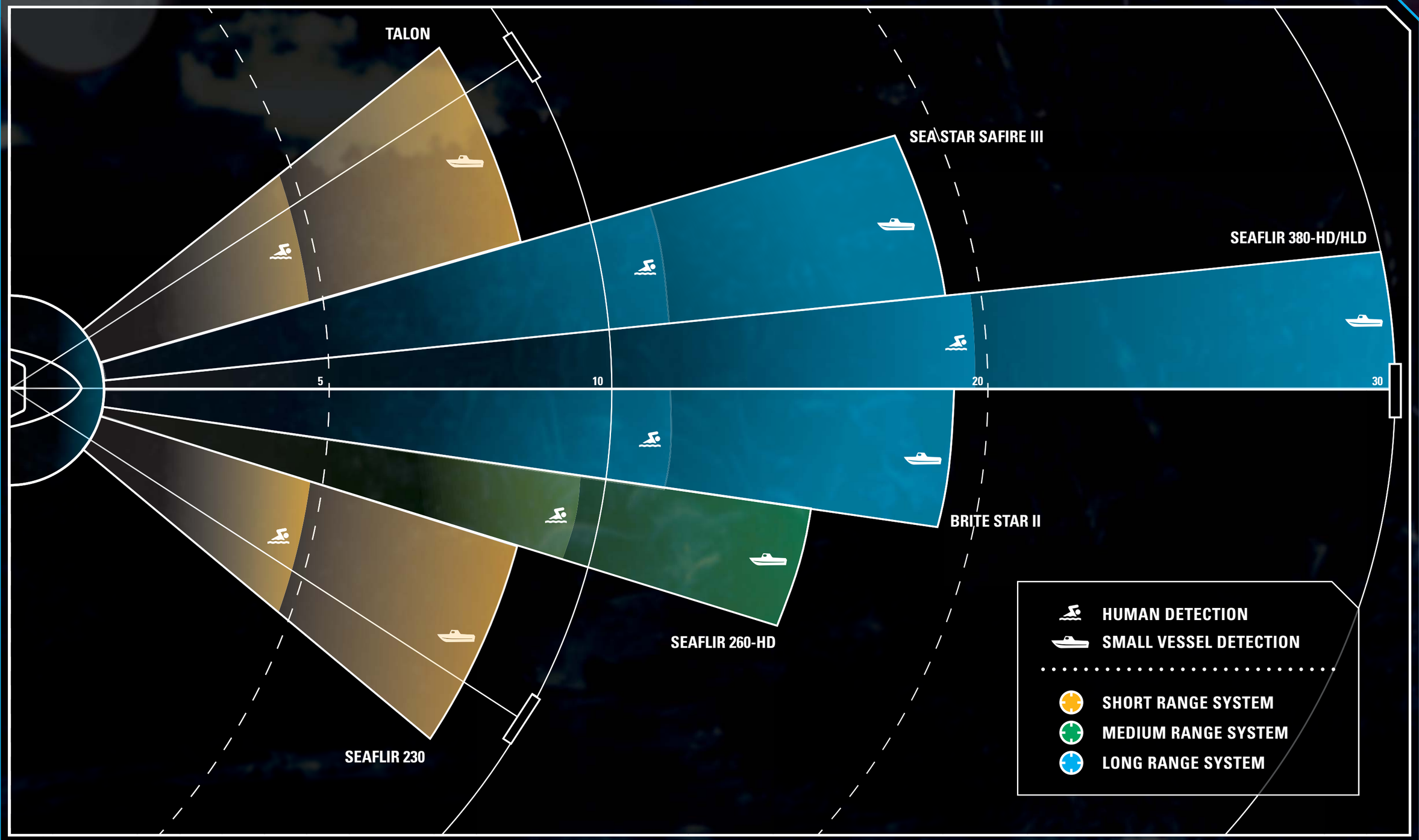
MEDIUM RANGE

SEA STAR SAFIRE III The Sea Star SAFIRE III is the EO/IR system for the US Navy's Shipboard Protection System (SPS). Carrying up to seven payloads, Star SAFIRE III is fully marinised and qualified for shipboard operations in all orientations. 		●	●	●			●	●	●	●				
SEAFLIR 260-HD The SeaFLIR 260-HD is a gyro stabilized eleven inch turret that provides unmatched high definition imagery with extremely wide fields of view and high magnification zoom optics, that offers a solid military program heritage. 	●	●	●	●			●	●	●	●	●		●	●
TALON / TALON XR With its digital architecture and AN/KAX-1 and -2 heritage, the Talon provides up to six payloads: thermal imager, color CCD, low light, laser pointer or laser illuminator, laser rangefinder, and IMU/GPS. 		●	●	●			●	●	●	●	●			

SHORT RANGE

SEAFLIR 230 The SeaFLIR 230 is a member of the FLIR family of 9" gimballed turrets. Representing the very latest in sensor technology, the lightweight SeaFLIR 230 offers high performance ISR in a compact, low mass and versatile system. 		●	●	●			●	●	●	●	●	●		

MARITIME RANGE GUIDE



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