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

FLIR’s line 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.”

<table>
<thead>
<tr>
<th>YOUR REQUIREMENTS</th>
<th>MISSION READY</th>
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<tr>
<td>Mil-Std qualification</td>
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<td>Marinized construction</td>
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<td>2 to 6 axis stabilized</td>
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<td>Class-leading DRI</td>
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<td>Multi-spectral imaging</td>
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<td>Radar and mission system integration</td>
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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 ‘compact’ gimbal with the SeaFLIR II, which allowed Special Operations craft and Police/Coast Guard patrol boats to provide 24-hour intelligence, surveillance and reconnaissance for the first time. The SeaFLIR 230 and TALON are lightweight, sealed and tough to help crews in the roughest conditions. They offer multiple automated features and communications algorithms to maximize the performance of multi-tasking crews. These compact systems provide 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 compact sensors offer 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
• Gyro stabilized
• Multiple payload systems for both sensors and lasers (up to 7 in a 9” diameter ball)
• Integrated to navigation and command systems
• Qualified to mil-spec environmental standards for maritime reliability

KEY APPLICATIONS:
• Special Operations insertion / extraction support
• Customs and policing interdiction activities
• EEZ protection
• Environmental monitoring
• Counter piracy/narcotics interdiction
**Blue Water Operations**

**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
- 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

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**Long Range Surveillance**

**A single sensor for multiple missions**

FLIR Maritime systems provide the highest level of integrated mid and long-range observation capabilities coupled with powerful work load reduction and interoperability features. Whether used for drug interdiction, anti-piracy or border protection our sensors provide the benefits of multiple imaging and laser payloads, standard ship’s system communications architectures and incredibly tough packaging specifically for your environment.

**Key Installation**

The French Navy took delivery of the first of the new GoWind Class of Offshore Patrol Vessels from DCNS in May 2012. FLIR’s Talon compact EO/IR sensor is integrated with the Polaris Combat Management System to detect vessels and other objects >10 Km standoff range during EEZ and patrol duties.
**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, FLIR sensors present a multi-spectrum 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 sensors 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 munitions offer a first shot protection advantage at ranges of 5km or more. FLIR’s patented, diode-pumped, advanced laser designators have the tightest beams, best boresight and highest duty cycles available for SPOT-ON accuracy and security.

**FIRE CONTROL**

Fire control is 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 maritime sensors 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**

FLIR Systems gimbals with an embedded navigation package (IMU) provide precise targeting capability that can be provided to the ship’s systems and weapons. All systems have radar and GPS interfaces for direct slew-to-cue capability, automatic scan and detection features, and laser range finder options. Some systems now offer high PRF eyesafe laser rangefinders to provide multi-hertz target location feedback to weapons systems without ever having to point a gun at a potential threat.

**KEY INSTALLATION**

**USS OSCAR AUSTIN**

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 II A guided-missile destroyer.
FLIR sensors provide increased capability and communications to the command and control system, GPS, INS, Radar, Moving Map, Searchlight, AIS and more.

Service and Support

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 their systems. Our highly experienced engineers are available to deploy world-wide to support our customers’ ships, vessels, and harbor facilities, enabling fast and effective installation, integration, fault finding, training and equipment upgrades.

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 their systems. Our highly experienced engineers are available to deploy world-wide to support our customers’ ships, vessels, and harbor facilities, enabling fast and effective installation, integration, fault finding, training and equipment upgrades.

Our Customers are Our Credentials

Securing assets at sea is a demanding job; FLIR knows that once a ship has left the harbor wall, her crew depends on our EO/IR sensor to perform reliably and perfectly without fail. We use our 20 years of maritime fielding experience to build our systems with the longest mean time between failure rates of any supplier 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.

Commercially Available Connectors & Wiring

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

In addition to industry standard marinized connectors and wiring, FLIR transcends typical installation via the use of stainless steel and hermetic 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.

FLIR Common Interface

Eliminating proprietary interface cabling, the FLIR Common Interface relies upon commercial interface standards, connectors and wiring. This simplifies installation between family systems, exterior systems (aircraft power, video display, recording devices, controllers) and other devices that utilize commercial/industrial standards (moving maps, nav systems, radars, GPS, etc.).
### SEAFLIR 280-HD
The all-digital, full high definition SeaFLIR 280-HD provides superior image stabilization, ultra long range imaging performance, and true metadata embedded in digital video.

### 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.

### 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 marinized and qualified for shipboard operations in all orientations.

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

### 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 280-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.

### SeaSTAR 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.

### MARITIME PRODUCT FEATURES

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<th>SYSTEM</th>
<th>HD</th>
<th>SD</th>
<th>EO</th>
<th>MWIR</th>
<th>SWIR</th>
<th>LD</th>
<th>LRF</th>
<th>LI/LP</th>
<th>GPS</th>
<th>EO Continuous</th>
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**MARITIME RANGE GUIDE**

- **SEAFLIR 380-HD/HLD**
  - The only all-digital, full HD maritime system.

- **BRITE STAR II**
  - The most powerful multi-sensor targeting system in its class.

- **SEA STAR SAFIRE III**
  - The multi-mission imaging solution for maritime applications.

- **SEAFLIR 280-HD**
  - Long range, gyro-stabilized RSTA system for maritime operations.

- **SEAFLIR 230**
  - Long range, gyro-stabilized RSTA system for maritime operations.

- **TALON / TALON XR**
  - High performance, compact multi-sensor thermal imaging system.
Equipment described herein may require US Government authorization for export purposes. Diversion contrary to US law is prohibited.