

Sea-Based Military Electro-Optical & IR Systems Market Size & Share Analysis - Growth Trends & Forecasts (2025 - 2030)
Industry: Aerospace & Defense
URL: <https://www.mordorintelligence.com/industry-reports/sea-based-military-electro-optical-and-infrared-systems-market>

Sea-based Military Electro-optical And Infrared Systems Market Size and Share Study Period | 2019 - 2030 |
Market Size (2025) | USD 2.44 Billion |
Market Size (2030) | USD 2.73 Billion |
CAGR (2025 - 2030) | 2.32% |
Fastest Growing Market | Asia Pacific |
Largest Market | North America |
Market Concentration | Medium |
Major Players*Disclaimer: Major Players sorted in no particular order

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Sea-based Military Electro-optical And Infrared Systems Market Analysis by Mordor IntelligenceThe Sea-based Military Electro-optical And Infrared Systems Market size is estimated at USD 2.44 billion in 2025, and is expected to reach USD 2.73 billion by 2030, at a CAGR of 2.32% during the forecast period (2025-2030).

Many countries are investing in sophisticated electro-optical and infrared (EO/IR) systems for maritime purposes, including threat detection, surveillance, and target identification, due to the rise in maritime conflicts and dangers to naval vessels around the world.

The increasing tensions among nations in the vicinity of the Northern Atlantic and Arctic waters and the South China Sea are fueling the expansion of naval vessel and boat production and acquisition. This aspect is driving the market growth of electro-optical and infrared systems for military use at sea. Technological innovations are also fueling the development of advanced EO/IR systems worldwide. The use of sensor-based imaging and tracking systems that rely on EO/IR technology gives navies an advantage in extreme weather and day/night situations, thus improving their situational awareness while at sea.

Global Sea-based Military Electro-optical And Infrared Systems Market Trends and InsightsHyperspectral Segment is Projected to Showcase Highest Growth during the Forecast PeriodThe growth of territorial conflicts and border issues increased the risk for militaries' maritime assets, which led to increasing emphasis on surveillance, threat detection, and target identification at sea. As modern combat involves a greater emphasis on these capabilities, armed forces primarily focus on incorporating and integrating sophisticated and advanced hyperspectral imaging technologies into their naval vessels. The growth of this segment is expected to increase due to rising military expenditure and various modernization efforts by major global powers. For instance, in 2022, the global military expenditure reached USD 2,240 billion, a growth of 6% from 2021.

Navies need to obtain motion imagery from EO/IR sensors that provide day-night, long-range eyes on the target, which improves their ability to identify targets, perform threat assessment, assess intent according to the rules of engagement, and support weapon engagement through automatic tracking and fire control solutions through line-of-sight. Hence, various companies are developing advanced hyperspectral imaging EO/IR solutions for improved protection in the sea. For instance, in March 2023, an Australian company named Arkeus launched its cutting-edge hyperspectral sensor solution called the Hyperspectral Optical Radar (HSOR). This

s advanced technology is designed for a range of applications, including ISR in the sea and improving maritime domain awareness. As the naval vessels are isolated from the terrain, it becomes important for them to possess advanced threat detection and countermeasure systems for their long-term survival from impending threats. This is driving the growth of the R&D segment currently. Such developments are expected to drive this segment's demand during the forecast period.

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Asia-Pacific to Exhibit the Highest Growth Rate during the Forecast PeriodThe demand for sea-based military EO/IR systems market in Asia-Pacific is driven by increasing tensions and conflicts, particularly in the South China Sea, the East China Sea, and the Indian Ocean. Many nations, including China, have directed their attention toward upgrading their naval capabilities by investing significantly in the latest advancements in EO/IR technologies. China is actively integrating its Over-the-horizon Surface Wave (OTH-SW) radars and electro-optical sites into its anti-ship missile systems. The combined system provides accurate targeting information about enemy ships and submarines.

For instance, in April 2023, China's latest Type 055 destroyer was officially inducted into the country's Navy. The destroyer features navigation radars, various communication and intelligence systems, electronic warfare support measures (ESM), electronic countermeasures (ECM), electro-optic (EO) sensors, laser-warning systems, optronic jammers, and datalink systems. Similarly, in December 2023, Japan started building 24 new FFM missile frigates called the Mogami class. These are being procured in two batches of 12 each. These frigates feature Mitsubishi Electric's OPY-2 X-band multi-purpose active electronically scanned array (AESA) radar and OAX-3 electro-optical/infrared (EO/IR) sensors. Such developments in the naval industry and ongoing naval vessel procurement and modernization programs are expected to drive growth for the sea-based military electro-optical and infrared systems market during the forecast period.

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Competitive LandscapeThe sea-based military electro-optical & IR systems market is semi-consolidated as only a few players account for a major market share. Companies such as Elbit Systems Ltd, Rheinmetall AG, Teledyne FLIR LLC, Thales, and Safran SA dominate the market. The market is witnessing much innovation in technologies like long-distance and infrared ranging and sensor fusion. The key players in the market compete on the price and quality of the products, and the growing naval market provides a huge opportunity for key players to generate revenues by gaining new installation and system upgrade contracts.

Sea-based Military Electro-optical And Infrared Systems Industry Leaders* Rheinmetall AG

* Elbit Systems Ltd.

* Teledyne FLIR LLC

* THALES

* Safran SA

* *Disclaimer: Major Players sorted in no particular order

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Recent Industry Developments July 2022: the US Navy contracted L3Harris Technologies to provide a Shipboard Panoramic Electro-Optic/Infrared (SPEIR) system for USD 205 million. This system can be deployed on multiple Navy platforms, from small, unmanned surface vessels to massive aircraft carriers, using a Modular Open Systems Approach (MOSA).

February 2022: Teledyne FLIR Defense was awarded an indefinite quantity (IDIQ) contract by the US Naval Surface Warfare Center to service electro-optical sensor systems used for Intelligence, Surveillance and Reconnaissance (ISR). Under the USD 43.9 million contract, the company will provide replacement parts and technical support for several land and sea-based systems used by the United States Navy and Coast Guard.

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Global Sea-based Military Electro-optical And Infrared Systems Market Report Scope Electro-optical and infrared systems, also referred to as EO/IR systems, cover a wide range of distinct technologies based on targets and their missions. These sensors include both visible spectrum and infrared sensors, due to which EO/IR systems provide total situational awareness during both day and night, even in low light conditions. Their applications include, but are not limited to, security, combat, patrol, surveillance, reconnaissance, and search and rescue operations.

The sea-based military electro-optical & IR systems market is segmented by imaging technology and geography. By imaging technology, the market is segmented into multispectral and hyperspectral. The report also covers the market sizes and forecasts for the sea-based electro-optical & IR systems market in major countries across different regions. For each segment, the market size is provided in terms of value (USD).

Imaging Technology Multispectral |
 Hyperspectral |
 Geography North America | United States |
 | Canada |
 Europe | Germany |
 | United Kingdom |
 | France |
 | Russia |
 | Rest of Europe |
 Asia-Pacific | India |
 | China |
 | Japan |
 | South Korea |
 | Australia |
 | Rest of Asia-Pacific |
 Latin America | Brazil |
 | Rest of Latin America |
 Middle East and Africa | Saudi Arabia |
 | Egypt |
 | Israel |
 | Rest of Middle East and Africa |

Imaging Technology | Multispectral |
| Hyperspectral |
|
Geography | North America | United States |
| Canada |
|
Europe | Germany |
| United Kingdom |
| France |
| Russia |
| Rest of Europe |
|
Asia-Pacific | India |
| China |
| Japan |
| South Korea |
| Australia |
| Rest of Asia-Pacific |
|
Latin America | Brazil |
| Rest of Latin America |
|
Middle East and Africa | Saudi Arabia |
| Egypt |
| Israel |
| Rest of Middle East and Africa |

Key Questions Answered in the ReportHow big is the Sea-based Military Electro-optical And Infrared Systems Market? The Sea-based Military Electro-optical And Infrared Systems Market size is expected to reach USD 2.44 billion in 2025 and grow at a CAGR of 2.32% to reach USD 2.73 billion by 2030.

What is the current Sea-based Military Electro-optical And Infrared Systems Market size? In 2025, the Sea-based Military Electro-optical And Infrared Systems Market size is expected to reach USD 2.44 billion.

Who are the key players in Sea-based Military Electro-optical And Infrared Systems Market? Rheinmetall AG, Elbit Systems Ltd., Teledyne FLIR LLC, THALES and Safran SA are the major companies operating in the Sea-based Military Electro-optical And Infrared Systems Market.

Which is the fastest growing region in Sea-based Military Electro-optical And Infrared Systems Market? Asia Pacific is estimated to grow at the highest CAGR over the forecast period (2025-2030).

Which region has the biggest share in Sea-based Military Electro-optical And Infrared Systems Market? In 2025, the North America accounts for the largest market share in Sea-based Military Electro-optical And Infrared Systems Market.

What years does this Sea-based Military Electro-optical And Infrared Systems Market cover, and what was the market size in 2024? In 2024, the Sea-based Military Electro-optical And Infrared Systems Market size was estimated at USD 2.38 billion. The report covers the Sea-based Military Electro-optical And Infrared Systems Market historical market size for years: 2019, 2020, 2021, 2022, 2023 and 2024. The report also forecasts the Sea-based Military Electro-optical And Infrared Systems Market size for years: 2025, 2026, 2027, 2028, 2029 and 2030.

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Sea-based Military Electro-optical And Infrared Systems Market ReportStatistics for the 2025 Sea-based Military Electro-optical And Infrared Systems market share, size and revenue growth rate, created by Mordor Intelligence™ Industry Reports. Sea-based Military Electro-optical And Infrared Systems analysis includes a market forecast outlook for 2025 to 2030 and historical overview. Get a sample of this industry analysis as a free report PDF download.

Sea-based Military Electro-optical And Infrared Systems Report Snapshots* Sea-based Military Electro-optical And Infrared Systems Companies