Land-based Military Electro-optical And Infrared Systems - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2025 - 2030)

Market Report | 2025-04-28 | 120 pages | Mordor Intelligence

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Report description:

The Land-based Military Electro-optical And Infrared Systems Market size is estimated at USD 1.66 billion in 2025, and is expected to reach USD 1.93 billion by 2030, at a CAGR of 3.05% during the forecast period (2025-2030).

Advanced optronic systems have become essential to enhance land vehicles' combat effectiveness. Thermal sights, panoramic vision, and enhanced driver vision capabilities are some of the elements available for new and upgraded fighting vehicles. The amalgamation of these systems with advanced processing techniques enables operators to obtain wide-angle coverage for situational awareness and target acquisition, thereby helping them make better decisions on the battlefield.

In the current battlefield scenario, soldiers and land vehicles are required to function in the day, night, and under adverse weather and limited visibility conditions, where human vision is not enough. To counter this, military forces have been equipping their man-portable systems and armored vehicles with electro-optical vision systems to prepare them to fight in modern battlefield scenarios. This is expected to bolster the market prospects during the forecast period.

The growing military spending of many countries has been fuelling the development and procurement of new and advanced systems that use a wide variety of sensors, including EO/IR sensors. On this note, in 2022 the global military expenditure reached USD 2,240 billion, this was a growth of 6% from the year 2021. The market studied is expected to grow steadily over the forecast period due to the growing demand for enhanced imaging capabilities for various manned and unmanned systems. These systems make use of EO/IR sensors. Countries have been progressively adopting these systems to increase their situational awareness.

Land-based Military Electro-optical and Infrared Systems Market Trends

Vehicle-mounted Segment is Projected to Showcase Highest Growth During the Forecast Period

Advanced optronic systems are becoming essential to enhance armored vehicles' combat effectiveness. Thermal imaging, 360-degree vision, and enhanced night vision capabilities are some of the technologies being focused upon for land vehicles and dismounted infantrymen. With the focus growing on enhancing vehicle protection systems, players are working on sensors that provide expanded visibility, situational awareness, and threat warning to military armored vehicles and crews. The demand for this segment is expected to increase due to rising military expenditure, and various military modernization efforts.

Additionally, the ongoing modernization efforts for land vehicles are also expected to generate demand for newer-generation vehicle-based EO/IR sensors. RWS for land vehicles has grown more effective with the incorporation of features, like fire-on-the-move capabilities, day and night imaging, automatic target tracking, laser range finder for accurate ballistics, last-round warning, manual backup, and high ammunition storage capabilities, among others. Due to this, many countries are upgrading their weapon systems to newer versions to take advantage of the latest technologies. For instance, in September 2023, the US Army awarded Kongsberg a USD 94 million order for the supply of an additional 409 Commonly Remotely Operated Weapon Station (CROWS). The CROWS weapon station features a day camera, thermal imager, and laser range finder (LRF), and it has fire-on-the-move capabilities. Such developments are envisioned to drive the segment growth during the forecast period.

North America to Dominate Market Share During the Forecast Period

North America held the largest market share among all the regions driven by high demand from the US. The enhanced capabilities of China and Russia on the battlefield forced the US to increase its investments in technologically advanced military vehicles and weapon systems. Some of the large acquisitions planned by the US Army over the next two years include a collection of night vision devices, including night-vision goggles, laser target locator modules, monocular night vision devices, the Integrated Visual Augmentation System (IVAS) heads-up display, and multi-function laser illuminators. For instance, in July 2023 the US Army awarded a USD 117.5 million contract to RTX Corporation for low-rate initial production of 3rd Generation Forward Looking Infrared (3GEN FLIR) B-Kit sensors. As per the terms of the contract, RTX Corporation will deliver 3GEN FLIR B-Kit sensors for the US Army's combat platforms. The 3GEN FLIR will enable soldiers to detect, recognize, and identify military targets from civilian targets in all operating environments and conditions via improved long-range imaging capabilities.

Additionally, as modern warfighting becomes more technologically driven foreign military powers such as the US are integrating cutting-edge systems to boost combat preparedness. For instance, in March 2022, the US Army announced its plans to procure Microsoft's militarised HoloLens 2 augmented reality (AR) system. Also, the country's focus on obtaining advanced ISR capabilities is proving to be fruitful for several EO/IR technology providers. The procurement of unmanned ground vehicles for ISR purposes is expected to increase in the country in years to come, which will propel the demand for land-based military EO/IR systems from North America during the forecast period.

Land-based Military Electro-optical and Infrared Systems Industry Overview

The land-based military electro-optical and infrared systems market is consolidated as only a few players account for a major market share. Some of the prominent players in the market are Teledyne Technologies Incorporated, L3Harris Technologies, Inc., BAE Systems plc, THALES, and Leonardo S.p.A.. These players are highly focusing on modifation and enhancement of their current capabilities through continuous R&D and introduce sophisticated features to deliver value-added EO/IR solutions to end-users. Most of the integration programs are long-term, and hence, several IDIQ contracts are currently underway, signifying design modification and production of sophisticated EO/IR sensors as per end-user specifications. Gaining such contracts will help the players with continuous cash inflow, thereby helping their sustained growth. Furthermore, the development of a new integration platform drives demand for the integration of sophisticated EO/IR sensors and systems, which is expected to create a positive outlook for the market during the forecast period.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

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