

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

Air-based Military Electro-optical And Infrared Systems Market Size and Share Study Period | 2019 - 2030 |
Market Size (2025) | USD 4.97 Billion |
Market Size (2030) | USD 5.71 Billion |
CAGR (2025 - 2030) | 2.84% |
Fastest Growing Market | Asia Pacific |
Largest Market | North America |
Market Concentration | Medium |
Major Players*Disclaimer: Major Players sorted in no particular order

Image © Mordor Intelligence. Reuse requires attribution under CC BY 4.0.

Air-based Military Electro-optical And Infrared Systems Market Analysis by Mordor IntelligenceThe Air-based Military Electro-optical And Infrared Systems Market size is estimated at USD 4.97 billion in 2025, and is expected to reach USD 5.71 billion by 2030, at a CAGR of 2.84% during the forecast period (2025-2030).

The global market for air-based military electro-optical and infrared systems is expected to grow steadily as countries seek to enhance their airborne intelligence, surveillance, and reconnaissance (ISR) capabilities.

Some key factors driving the market growth are the increasing defense expenditures of various nations, the rising threat of terrorism and border conflicts, the development of new-generation aerial platforms, and the advancement of sensor technologies. However, the market also faces some challenges, such as design constraints, technological limitations, supply chain risks, and budget cuts that may hamper market growth in some countries. Still, with the current growth rate, the market is expected to grow positively during the forecast period.

The market is also expected to witness several opportunities in the future as new technologies and applications emerge, such as the development of hyperspectral imaging sensors that can capture images across a wide range of wavelengths and the adoption of these systems for counter-drone operations.

Global Air-based Military Electro-optical And Infrared Systems Market Trends and InsightsHyper-spectral Segment is Projected to Showcase Highest Growth During the Forecast PeriodMore advanced airborne electro-optics and infrared systems are needed more than ever, owing to the rise in conflicts, terrorism, border clashes, etc. 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 2023, the global military expenditure reached USD 2,443 billion; this was a growth of 6.8% from the year 2022. Additionally, various governments and OEMs across the world are investing in the procurement and development of advanced aircraft with hyperspectral imaging systems to address the surveillance, reconnaissance, and airborne early warning needs of their air forces. For instance, in April 2023, RTX Corporation unveiled its next-generation electro-optical intelligent-sensing system called RAIVEN. The RAIVEN system uses artificial intelligence, hyperspectral imaging, light detection, and ranging technologies to allow military pilots to detect threats faster and more accurately.

Furthermore, several companies are developing advanced hyperspectral imaging technologies.

technology for drones, specifically in ISR applications. This is because drones are considered more stealthy than military aircraft for performing ISR missions successfully. For instance, in March 2023, Australian company Arkeus unveiled its Hyperspectral Optical Radar (HSOR), a real-time autonomous wide-area hyperspectral sensor for ISR applications for drones and manned aircraft. This technology was developed under a contract from the Australian DoD. Such developments are expected to drive the demand for this segment during the forecast period.

Image © Mordor Intelligence. Reuse requires attribution under CC BY 4.0.

Asia-Pacific to Exhibit the Highest Growth Rate During the Forecast Period Asia-Pacific is marked by the presence of countries such as China, Japan, South Korea, India, etc., that have some of the most significant defense budgets in the world. China and India are significantly increasing their defense spending on developing, upgrading, and modernizing their aircraft fleet. The military stand-offs between neighboring nations, tensions at the South China Sea, and the growing nuclear threats in the region have led to the increasing procurement of aerial systems by several countries in Asia-Pacific. For instance, in November 2023, the Indian MoD approved defense acquisition projects worth INR 2.23 lakh crore (USD 26 billion), including procuring 97 Tejas light combat aircraft and 156 Prachand combat helicopters. The delivery of these aircraft is expected to start in 2024.

In addition, these countries are also investing in developing advanced EO/IR systems to cater to the demand driven by modern warfare. For instance, in February 2023, Bharat Electronics Limited (BEL) displayed its short wave infra-red (SWIR) REV III multisensor optical payload for the Dhruv Mk III light helicopter at the Aero India 2023. The Dhruv Mk III was inducted into the Indian Army in mid-2022. The optical payload can be used for multispectral electro-optical intelligence, surveillance, target acquisition, and reconnaissance. Similarly, in August 2023, the US government agreed to supply infrared search and track systems for Taiwan's fleet of F-16 Falcon Jets under the Foreign Military Sales agreement of USD 500 million. Such developments are propelling the growth of the air-based military electro-optical and infrared systems market in the Asia-Pacific region.

Image © Mordor Intelligence. Reuse requires attribution under CC BY 4.0.

Competitive Landscape The air-based military electro-optical & infrared systems market is semi-consolidated, as only a few players account for a significant market share. Northrop Grumman Corporation, Leonardo S.p.A., THALES, Teledyne FLIR LLC, and RTX Corporation dominate the market. These players heavily invest in R&D to develop advanced products that offer better situational awareness.

The market is also witnessing technological innovations like long-distance, infrared ranging, and sensor fusion. So, various players in the market compete to offer multiple products and services at competitive prices to meet the diverse needs of their customers. Furthermore, developing advanced products can help the players win upgrade, retrofitting, and line-fitting contracts from governments and defense agencies, propelling their growth during the forecast period.

Air-based Military Electro-optical And Infrared Systems Industry Leaders* Northrop Grumman Corporation

* Teledyne FLIR LLC

* RTX Corporation

* Leonardo S.p.A.

* THALES

* *Disclaimer: Major Players sorted in no particular order

Image © Mordor Intelligence. Reuse requires attribution under CC BY 4.0.

Recent Industry DevelopmentsIn June 2023, Leonardo DRS, Inc., a subsidiary of Leonardo S.p.A., unveiled its next-generation stabilized, multi-sensor EO/IR payload gimbal for small to medium Unmanned Aircraft Systems, light fixed-wing aircraft, and helicopters.

In March 2023, the Romanian Ministry of National Defense awarded four contracts to Elbit Systems Ltd. to provide aircraft upgrades, electronic warfare suites, electro-optical infrared (EOIR) payloads, and other systems for the country's IAR 300 helicopters.

Table of Contents for Air-based Military Electro-optical And Infrared Systems Industry Report1. INTRODUCTION

- * 1.1 Study Assumptions
 - * 1.2 Scope of the Study
2. RESEARCH METHODOLOGY

3. EXECUTIVE SUMMARY

4. MARKET DYNAMICS

- * 4.1 Market Overview
- * 4.2 Market Drivers
- * 4.3 Market Restraints
- * 4.4 Porter's Five Force Analysis* 4.4.1 Threat of New Entrants
- * 4.4.2 Bargaining Power of Buyers/Consumers
- * 4.4.3 Bargaining Power of Suppliers
- * 4.4.4 Threat of Substitute Products
- * 4.4.5 Intensity of Competitive Rivalry

5. MARKET SEGMENTATION

- * 5.1 Imaging Technology* 5.1.1 Multi-Spectral
- * 5.1.2 Hyper-Spectral
- * 5.2 Geography* 5.2.1 North America
- * 5.2.1.1 United States
- * 5.2.1.2 Canada
- * 5.2.2 Europe
- * 5.2.2.1 Germany
- * 5.2.2.2 United Kingdom
- * 5.2.2.3 France
- * 5.2.2.4 Russia
- * 5.2.2.5 Rest of Europe
- * 5.2.3 Asia-Pacific
- * 5.2.3.1 India
- * 5.2.3.2 China
- * 5.2.3.3 Japan
- * 5.2.3.4 South Korea
- * 5.2.3.5 Rest of Asia-Pacific
- * 5.2.4 Latin America

- * 5.2.4.1 Brazil
- * 5.2.4.2 Mexico
- * 5.2.4.3 Rest of Latin America
- * 5.2.5 Middle-East and Africa
- * 5.2.5.1 Israel
- * 5.2.5.2 Saudi Arabia
- * 5.2.5.3 South Africa
- * 5.2.5.4 Rest of Middle-East and Africa

6. COMPETITIVE LANDSCAPE

- * 6.1 Vendor Market Share
- * 6.2 Company Profiles* 6.2.1 Elbit Systems Ltd.
- * 6.2.2 Saab AB
- * 6.2.3 General Dynamics Corporation
- * 6.2.4 Leonardo S.p.A.
- * 6.2.5 THALES
- * 6.2.6 Northrop Grumman Corporation
- * 6.2.7 Teledyne FLIR LLC
- * 6.2.8 Rafael Advanced Defense Systems Ltd.
- * 6.2.9 HENSOLDT AG
- * 6.2.10 RTX Corporation
- * 6.2.11 IAI

* *List Not Exhaustive

7. MARKET OPPORTUNITIES AND FUTURE TRENDS

Global Air-based Military Electro-optical And Infrared Systems Market Report Scope
Electro-optical and infrared systems, or 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, which is why EO/IR systems provide total situational awareness 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 air-based military electro-optical and infrared systems market is segmented by imaging technology and geography. By imaging technology, the market is segmented into multi-spectral and hyper-spectral. The report also covers the market sizes and forecasts for the air-based electro-optical and infrared systems in major countries across different regions. For each segment, the market size is provided in terms of value (USD).

Imaging Technology
Multi-Spectral |
Hyper-Spectral |
Geography
North America | United States |
| Canada |
Europe | Germany |
| United Kingdom |
| France |
| Russia |
| Rest of Europe |
Asia-Pacific | India |
| China |
| Japan |
| South Korea |
| Rest of Asia-Pacific |
Latin America | Brazil |
| Mexico |
| Rest of Latin America |
Middle-East and Africa | Israel |

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

Key Questions Answered in the ReportHow big is the Air-based Military Electro-optical And Infrared Systems Market? The Air-based Military Electro-optical And Infrared Systems Market size is expected to reach USD 4.97 billion in 2025 and grow at a CAGR of 2.84% to reach USD 5.71 billion by 2030.

What is the current Air-based Military Electro-optical And Infrared Systems Market size? In 2025, the Air-based Military Electro-optical And Infrared Systems Market size is expected to reach USD 4.97 billion.

Who are the key players in Air-based Military Electro-optical And Infrared Systems Market? Northrop Grumman Corporation, Teledyne FLIR LLC, RTX Corporation, Leonardo S.p.A. and THALES are the major companies operating in the Air-based Military Electro-optical And Infrared Systems Market.

Which is the fastest growing region in Air-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 Air-based Military Electro-optical And Infrared Systems Market? In 2025, the North America accounts for the largest market share in Air-based Military Electro-optical And Infrared Systems Market.

What years does this Air-based Military Electro-optical And Infrared Systems Market cover, and what was the market size in 2024? In 2024, the Air-based Military Electro-optical And Infrared Systems Market size was estimated at USD 4.83 billion. The report covers the Air-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 Air-based Military Electro-optical And Infrared Systems Market size for years: 2025, 2026, 2027, 2028, 2029 and 2030.

Related Reports Explore More Reports5G In Defense MarketAircraft Arresting System MarketElectric Propulsion Systems MarketExplosive Trace Detection MarketTrend sHelicopter Simulator Market ShareOnboard Connectivity MarketSmart Airport Market TrendsSoftware Defined Radio Market ShareSurveillance Radar Market SizeMilitary Wearables Industry

Air-based Military Electro-optical And Infrared Systems Market ReportStatistics for the 2025 Air-based Military Electro-optical And Infrared Systems market share, size and revenue growth rate, created by Mordor Intelligence™ Industry Reports. Air-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.

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