

Unmanned Aerial Systems Camera Market Size & Share Analysis - Growth Trends and Forecast (2026 - 2031)

> ****Industry:**** Drones, UAVs & Urban Air Mobility (Aerospace & Defense)
> ****Source:**** <https://www.mordorintelligence.com/industry-reports/unmanned-aerial-systems-camera-market>
> ****Scraped Date:**** 2026-09-17

Executive Market Summary

Market Metric	Details
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Base Market Size	USD 3.62 billion
Projected Forecast (2031)	USD 3.62 billion
Growth Rate (CAGR)	16.59 %
Largest Market Region	N/A
Fastest-Growing Region	N/A

Market Visualizations & Infographics

![Major players in Unmanned Aerial Systems Camera industry](images/chart_2.png)

![Unmanned Aerial Systems Camera Market Size](images/chart_3.png)

![Unmanned Aerial Systems Camera Market Share by Camera Type, 2025](images/chart_4.png)

![Unmanned Aerial Systems Camera Market Share by Resolution, 2025](images/chart_5.png)

![Unmanned Aerial Systems Camera Market Growth Rate by Region](images/chart_6.png)

![Unmanned Aerial Systems Camera Market Concentration](images/chart_7.png)

![Icon](images/chart_8.png)

![footer background image](images/chart_10.png)

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![ESOMAR](images/chart_17.png)

![GPTW](images/chart_19.png)

Comprehensive Research Analysis

Overview Points List Flex 49 Share Feature End

Market Overview	Study Period 2019 - 2031
Market Size (2026)	USD 3.62 Billion
Market Size (2031)	USD 7.80 Billion
Growth Rate (2026 - 2031)	16.59 %
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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Market Overview

Unmanned Aerial Systems Camera Market Analysis by Mordor IntelligenceThe unmanned aerial systems camera market size was valued at USD 3.03 billion in 2025 and is estimated to grow from USD 3.62 billion in 2026 to reach USD 7.80 billion by 2031, at a CAGR of 16.59% during the forecast period (2026-2031). Infrared payloads, AI-assisted imaging, and compact multi-sensor designs are shaping demand across defense, industrial inspection, and public safety uses in the unmanned aerial systems camera market. The 2026 expansion reflects stronger adoption of payloads that combine visible-light, thermal, and specialized sensing functions in compact housings that meet weight and power limits for smaller aircraft. The market is also moving toward autonomous and semi-autonomous operations, in which camera systems serve as perception tools that support detection, tracking, and onboard decision support rather than serving only as capture devices. Compliance rules, domestic sourcing priorities, and export-ready product design are shifting more value toward suppliers that can package imaging performance with certification readiness in the unmanned aerial systems camera market. This leaves room for growth in public safety, government surveillance, and continuous asset inspection. At the same time, it also raises pressure on smaller vendors that lack broad product coverage or certified supply chains.

Key Report Takeaways* By camera type, HD cameras accounted for 53.67% of revenue in 2025, while thermal cameras are projected to grow at an 18.65% CAGR through 2031.

* By application, photography and videography accounted for 34.40% of revenue in 2025, while thermal imaging is forecast to grow at a 19.10% CAGR through 2031.

* By resolution, the 12 to 20 MP segment captured 31.85% of revenue in 2025, while the more than 32 MP segment is forecast to expand at a 19.05% CAGR through 2031.

* By end-user, commercial users represented 55.45% of revenue in 2025, while homeland security is forecast to grow at a CAGR of 17.83% through 2031.

* By geography, North America commanded 32.88% of the market share in 2025, while Asia-Pacific is projected to expand at a 17.65% CAGR through 2031.

Key Market Trends

Market Trends and InsightsDrivers Impact Analysis of Unmanned Aerial Systems Camera Market*Driver | (~) % Impact on CAGR Forecast | Geographic Relevance | Impact Timeline |

Advancements in AI-enabled onboard image processing systems | +3.20% | Global, led by North America and China | Short term (≤ 2 years) |

Emergence of SWaP-optimized thermal imaging cores for public safety UAS | +2.70% | North America and Europe, with spill-over to Middle East and Africa | Medium term (2-4 years) |

Declining cost of high-resolution CMOS imaging sensors | +2.50% | Global | Short term (≤ 2 years) |

Government incentives driving precision agriculture UAS applications | +2.00% | Asia-Pacific core, with secondary impact in North America | Medium term (2-4 years) |

Accelerated adoption of FPV drones in commercial cinematography | +1.80% | North America and Europe core, spill-over to Asia-Pacific | Medium term (2-4 years) |

Progress in satellite-to-UAS optical communications enabling BVLOS operations | +1.50% | Europe and North America core | Long term (≥ 4 years) |

Source: Mordor Intelligence |

Competitive Landscape

Competitive Landscape

The unmanned aerial systems camera market exhibits a mixed competitive structure, with greater concentration at the platform layer and much broader fragmentation among payload and sensor specialists. DJI's scale in the commercial drone ecosystem still gives it significant influence over payload expectations, product form factors, and imaging standards in the unmanned aerial systems camera market. At the same time, specialized thermal and ISR suppliers compete on compliance status, export readiness, and sensor integration rather than pure aircraft volume alone. Market power is not distributed evenly across the value chain. Companies that control thermal sensor IP, edge processing capability, or government-ready certification pathways can hold strong positions even without matching DJI's platform scale.

Teledyne FLIR OEM has strengthened its position through repeatable moves that connect sensor IP with system-level adoption in the unmanned aerial systems camera market. The Thermal by FLIR collaboration with Gremsy created the ORUS-L and Lynx payloads, which package ITAR-free thermal capability into NDAA-compliant solutions for defense, public safety, and inspection users. Teledyne FLIR OEM also launched Prism C-UAS in April 2026, extending its role from hardware supply into AI-enabled counter-drone software built around thermal camera inputs. These moves show that competitive advantage in the unmanned aerial systems camera market is increasingly tied to ecosystem depth, not only to sensor performance.

DJI remains important because it continues to raise imaging expectations in the commercial tier of the unmanned aerial systems camera market. The Mini 5 Pro in September 2025 and the Avata 360 in March 2026 both showed that advanced imaging features are moving into lighter and more immersive product classes. Gremsy's June 2026 integration with Aerosense added another example, showing how payload makers can build position through long-endurance surveillance partnerships rather than through standalone sensor sales. Taken together, the competitive pattern in the unmanned aerial systems camera market favors companies that can link camera hardware, software intelligence, compliance, and mission integration into a single offering.

Unmanned Aerial Systems Camera Industry Leaders* Teledyne FLIR LLC

* SZ DJI Technology Co., Ltd.

* Sony Corporation

* Canon Inc.

* Panasonic Corporation

* *Disclaimer: Major Players sorted in no particular order

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Component Component 3 Scope Of The Report Bottom

Global Unmanned Aerial Systems Camera Market Report ScopeThe unmanned aerial systems camera market refers to imaging payloads and camera systems integrated with unmanned aerial systems to capture, process, stabilize, transmit, and store aerial visual data during flight operations. These systems combine optical sensors, lenses, image processors, stabilization mechanisms, mounting interfaces, and data links to support real-time viewing, recording, inspection, mapping, monitoring, and mission intelligence functions.

The unmanned aerial systems camera market is segmented by type, application, resolution, end-user, and geography. Based on the type, the drone camera market is

segmented into SD cameras and HD cameras, by application into photography & videography, thermal imaging, and surveillance. By resolution, the market is segmented into less than 12 MP, 12 to less than 20 MP, 20 to less than 32 MP, and more than 32 MP. By end user, the market is segmented into commercial, military, and homeland security. The report also covers the market sizes and forecasts for the unmanned aerial systems camera market in major countries across different regions. For each segment, the market size is provided in terms of value (USD).

By Camera TypeHD Cameras |
Thermal Cameras |
Others |

Segmentation Accordion Item

By GeographyNorth America | United States |
| Canada |
| Mexico |
Europe | United Kingdom |
| France |
| Germany |
| Italy |
| Rest of Europe |
Asia-Pacific | China |
| Japan |
| India |
| South Korea |
| Australia |
| Rest of Asia-Pacific |
South America | Brazil |
| Rest of South America |
| |
Middle East and Africa | Middle East | United Arab Emirates |
	Saudi Arabia
	Turkey
	Rest of Middle East
Africa	South Africa
	Rest of Africa

Frequently Asked Questions

What is the 2026 size of the unmanned aerial systems camera market?

The unmanned aerial systems camera market is estimated at USD 3.62 billion in 2026 and is forecast to reach USD 7.80 billion by 2031 at a 16.59% CAGR.

Which camera type leads revenue in this space?

HD cameras led with 53.67% of revenue in 2025 because they still serve the broadest installed base across cinematography, mapping, and inspection.

Which application is growing the fastest through 2031?

Thermal imaging is the fastest-growing application, with a projected CAGR of 19.10% through 2031, driven by inspection, firefighting, and ISR-related demand.

Why is thermal imaging gaining so much attention in drone payloads?

Thermal payloads are becoming smaller, more compliant, and easier to integrate, which is widening their use in public safety, defense, and industrial inspection.

Which region is expanding the fastest for camera-equipped UAS?

Asia-Pacific is growing the fastest, with a 17.65% CAGR through 2031, supported by agricultural subsidy programs, manufacturing depth, and surveillance use cases.

What is shaping competition among leading suppliers?

Competition is increasingly defined by compliance readiness, AI-enabled imaging, thermal sensor integration, and the ability to deliver mission-ready payload systems rather than stand-alone hardware.