

Event Camera Market Forecasts to 2030 – Global Analysis By Sensor Type (Dynamic Vision Sensors (DVS), Asynchronous Time-Based Image Sensors (ATIS) and Hybrid Event Sensors), Technology, Application, End User and By Geography

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Abstracts

According to Statistics MRC, the Global Event Camera Market is accounted for \$228.3 million in 2024 and is expected to reach \$290.6 million by 2030 growing at a CAGR of 4.1 % during the forecast period. The event camera is a bio-inspired vision sensor that detects changes in the scene by capturing pixel-wise light changes asynchronously, rather than traditional frame-based images. Unlike conventional cameras, it works with low latency, high dynamic range, and minimal motion blur, which makes it ideal for fast-moving environments. Event cameras work well because they process only normal changes and reduce redundant data.

Market Dynamics:

Driver:

Advancements in computer vision and AI

Advancements in computer vision and AI are pivotal drivers in the event camera market. These technologies enhance the capabilities of event cameras by enabling them to process visual data more efficiently and accurately. Event cameras benefit from AI's ability to analyze complex patterns and movements in real-time, making them ideal for applications in autonomous vehicles, robotics, and surveillance. The integration of AI allows for improved object detection and tracking, which is crucial for high-speed environments, thus driving the adoption of event cameras across various industries.

Restraint:

Limited awareness

Limited awareness about the benefits and applications of event cameras acts as a restraint on market growth. Many potential users are unfamiliar with how event cameras differ from traditional imaging technologies, which can hinder their adoption. This lack of awareness extends to understanding the cost-benefit advantages they offer, such as reduced data processing requirements and enhanced low-light performance.

Opportunity:

Expansion in industrial automation

The expansion in industrial automation presents a significant opportunity for the event camera market. As industries increasingly adopt automation to enhance efficiency and productivity, the demand for advanced sensing technologies like event cameras rises. These cameras offer real-time data processing with low latency, making them ideal for automated systems that require precise monitoring and control. Their ability to detect rapid changes in the environment supports tasks such as quality inspection, robotic navigation, and process optimization, driving their integration into automated industrial systems.

Threat:

Competition from traditional imaging technologies

Competition from traditional imaging technologies poses a threat to the event camera market. Conventional cameras are well-established with widespread acceptance across various applications, offering familiarity and cost-effectiveness. Despite the advanced capabilities of event cameras, their higher initial costs and the need for specialized processing algorithms can deter potential users.

Covid-19 Impact:

The Covid-19 pandemic had a dual impact on the event camera market. While it disrupted supply chains and slowed manufacturing processes, it also accelerated demand in sectors like industrial automation and surveillance due to increased safety

concerns. The pandemic highlighted the need for advanced monitoring solutions, boosting interest in event cameras for applications requiring real-time data analysis.

The dynamic vision sensors (DVS) segment is expected to be the largest during the forecast period

The dynamic vision sensors (DVS) segment is expected to account for the largest market share during the forecast period due to its capability to capture high-speed events with minimal latency. DVS technology excels in environments where rapid motion detection is critical, such as robotics and autonomous vehicles. Its ability to process changes at individual pixel levels reduces data load while maintaining high accuracy, making it a preferred choice for applications requiring precise temporal resolution.

The intensity event output segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the intensity event output segment is expected to witness the highest CAGR due to its enhanced ability to provide detailed information about changes in scene brightness. This feature is crucial for applications that require nuanced light intensity detection, such as advanced driver-assistance systems (ADAS) and surveillance. The segment's growth is driven by its capacity to deliver high-resolution data efficiently, supporting complex image processing tasks that demand fine-grained visual information.

Region with largest share:

The Asia Pacific region is anticipated to account for the largest market share during the forecast period due to its robust manufacturing sector and rapid adoption of Industry 4.0 principles. Countries like China and Japan are leading in industrial automation and autonomous vehicle technologies, driving demand for advanced sensing solutions like event cameras. The region's focus on smart manufacturing enhances its position as a key market player.

Region with highest CAGR:

The Asia Pacific region is anticipated to register the highest growth rate over the forecast period owing to its dynamic economic development and technological advancements. The increasing adoption of automation across industries coupled with

investments in smart infrastructure projects fuels demand for event cameras. The region's commitment to integrating cutting-edge technologies into manufacturing processes supports its rapid market expansion trajectory.

Key players in the market

Some of the key players in Event Camera Market include Prophesee, iniVation AG, Sony Corporation, Samsung Electronics Co., Ltd., Omnivision Technologies, Northrop Grumman Corporation, Cepton Technologies, Fox Robotics, Hillhouse Technology, Insightness AG, Movidius, Fujitsu Limited, Brillnics Inc., Stefanini IT Solutions, Toshiba Corporation and Teledyne FLIR.

Key Developments:

In December 2024, Fujitsu announced the development of a video analytics AI agent for frontline workplaces. The AI agent uses spatial video and image data from workplace camera footage, as well as written information, to draft reports and make recommendations for workplace improvements. The AI agent will be positioned as a core technology of Fujitsu's AI service 'Fujitsu Kozuchi'. Fujitsu will provide a trial environment for the AI agent in fiscal year 2024 and commence in-house implementation from January 2025.

In October 2024, LUCID Vision Labs, Inc., a leading designer and manufacturer of industrial cameras, today announced the launch of the new Triton2 EVS event-based 2.5GigE camera, featuring the IMX636 and IMX637 event-based vision sensors, realized in collaboration between Sony and Prophesee.

In May 2024, Cepton, Inc. ("Cepton") a Silicon Valley innovator and leader in high-performance lidar solutions for automotive and smart infrastructure applications announced the unveiling of its proprietary lidar simulation platform, StudioViz™. Developed by Cepton's in-house software teams, StudioViz aims to streamline lidar adoption processes from productization to deployment, helping automotive Original Equipment Manufacturers (OEMs) expedite lidar-based advanced driver assistance systems (ADAS) and autonomous vehicle (AV) development at minimized implementation costs. StudioViz also offers a powerful tool to facilitate a broad spectrum of cutting-edge R&D initiatives in ADAS and AV by researchers and universities.

Sensor Types Covered:

Dynamic Vision Sensors (DVS)

Asynchronous Time-Based Image Sensors (ATIS)

Hybrid Event Sensors

Technologies Covered:

Polarity Event Output

Intensity Event Output

Other Technologies

Applications Covered:

Motion Analysis & Tracking

High-Speed Imaging

3D Mapping & Reconstruction

Object Recognition

Visual SLAM

Machine Vision

Industrial Monitoring

End Users Covered:

Industrial Equipment

Aerospace & Defense

Automotive

Consumer Electronics

Healthcare

Research Institutions

Other End Users

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2022, 2023, 2024, 2026, and 2030

- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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