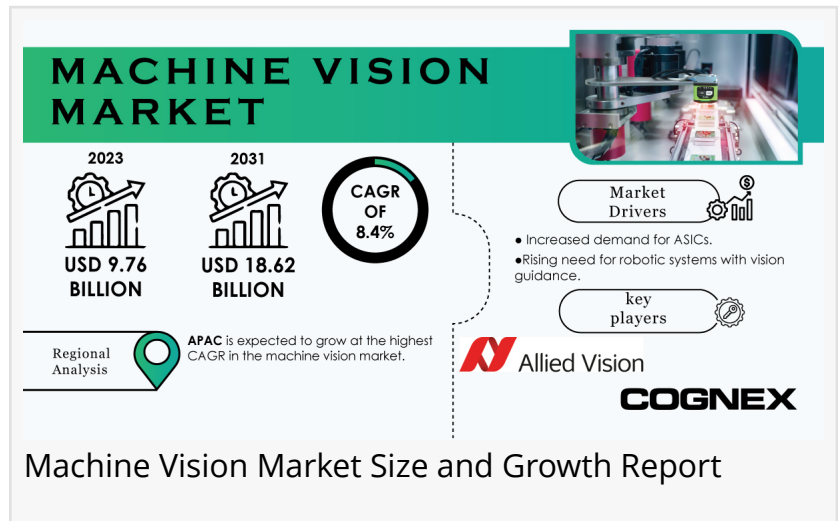


Machine Vision Market to Reach USD 18.62 Billion by 2031, Driven by Demand for Automation and Quality Control

Machine Vision Market Size, Share, Growth Drivers and Regional Analysis, Global Forecast 2024 - 2031

AUSTIN, TEXAS, UNITED STATES, June 7, 2024 /EINPresswire.com/ -- The SNS Insider report forecasts a promising future for the machine vision market, estimating its size to reach USD 18.62 billion by 2031. With a notable CAGR (Compound Annual Growth Rate) of 8.4% over the forecast period of 2024-2031.



Growing Demand for Enhanced Safety and Quality Fuels Market Expansion

The report provides the market's growth factors, highlighting the important role of safety and quality in the industrial sector. With the increasing adoption of automation and robotics, ensuring a safe work environment becomes paramount. Machine vision systems play an important role in achieving this objective. Advanced sensors and AI-powered quality control mechanisms empower immediate anomaly detection and interventions, fostering a safer workplace. These systems enable consistent product quality by facilitating real-time monitoring and data-driven decision-making. The report emphasizes the growing demand for application-oriented machine vision systems. These systems leverage cameras, digital signal processing, and advanced algorithms to scrutinize work performance. Their ability to differentiate between objects and detect anomalies under varied lighting conditions makes them invaluable for inspection tasks. This, coupled with stringent quality control regulations and consumer demands for high-quality products, is expected to propel the adoption of machine vision technology.

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KEY PLAYERS:

- Allied Vision Technologies
- Cognex Corporation
- LMI Technologies
- National Instruments Corporation
- Sick
- Basler
- Keyence Corporation
- Microscan Systems
- OMRON Corporation
- Tordivel

Recent Developments

- In June 2023, Omron Automation Americas introduced the F440 Smart Camera, offering flexibility for various machine vision operations. This camera boasts a high-resolution sensor, customizable lighting and optics, and simplified configuration software, catering to diverse applications such as cap inspection, box count, and label verification.
- SICK AG unveiled its multiScan136, a new addition to the multiScan100 family. This innovative product utilizes time-of-flight (TOF) measurement technology to generate a 3D perception of its surroundings, facilitating accurate self-localization and environment mapping for mobile robots in logistics, manufacturing, and indoor/outdoor environments.

Segment Analysis

By component, the hardware segment is expected to retain its dominance throughout the forecast period, accounting for over 58% of the market share. This segment encompasses cameras, sensors, processors, and lighting components, with cameras leading the pack due to the rising demand for CMOS imaging sensors. Software offerings are further categorized into barcode reading, standard algorithms, and deep learning software. Barcode reading ensures the quality of printed barcodes, while standard algorithms provide predefined functionalities for specific tasks. Deep learning software, on the other hand, leverages artificial intelligence to learn and adapt to complex inspection scenarios.

By application, the Quality assurance and inspection segment holds the largest market share of more than 48%. This dominance can be attributed to the extensive use of machine vision systems in tasks like label and barcode scanning, particularly in the packaging sector. These systems automate packaging processes, enhancing efficiency and accuracy.

Geopolitical Tensions and Economic Slowdown creates Potential Challenges

The report acknowledges the potential challenges posed by the ongoing Russia-Ukraine war and the possibility of an economic slowdown. The war can disrupt supply chains and create uncertainties in the global market, impacting the availability of raw materials and components

needed for machine vision systems. an economic slowdown could lead to budget constraints, potentially affecting investments in new technologies like machine vision. the report also highlights the long-term growth prospects for the market. The increasing focus on automation, Industry 4.0 adoption, and the growing demand for high-quality products are expected to remain key drivers, even amidst these temporary hurdles.

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Asia Pacific Poised for Significant Growth

The report identifies Asia Pacific as a region with immense potential for machine vision market growth. This can be attributed to the presence of major manufacturing hubs in countries such as China, Japan, India, and South Korea. These countries are prioritizing automation in their manufacturing processes, creating a significant demand for machine vision solutions. The region's rapid industrialization fosters innovation and technology adoption, further accelerating the market's growth.

Key Takeaways

- The report provides a comprehensive analysis of the global machine vision market, encompassing its current size, growth projections, and key drivers.
- The report emphasizes the crucial role of machine vision in enhancing safety and product quality within the industrial sector.
- The report highlights recent innovations such as the F440 Smart Camera and the multiScan136, showcasing the continuous advancements in machine vision technology.
- The report identifies the Asia Pacific region as a major growth driver, driven by the presence of leading manufacturing hubs in China, Japan, India, and South Korea. These countries' focus on automation and industrialization paves the way for significant market expansion.

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