

Machine Vision Market Size, Share & Industry by Component (Hardware, Software), Deployment (General, Robotic Cells), Product (PC-based Machine Vision System, Smart Camera-based Machine Vision System), Application, End-user Industry and Region - Global Forecast to 2028

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Abstracts

The global Machine vision market is expected to grow from USD 12.9 billion in 2023 to USD 18.4 billion by 2028, registering a CAGR of 7.3%. Machine vision is witnessing impressive growth, attributed to the continual evolution of artificial intelligence, camera technologies, and automation across diverse industries. Its versatile applications in manufacturing, healthcare, automotive, and other sectors are propelling the market to scale new heights. This upward trajectory is fueled by the increasing demand for precision quality control, object recognition, and inspection systems.

“Robotic cell segment to grow at highest CAGR in Liquid analyzer market.”

The Robotics cell segment is experiencing robust growth in the market. Robotic cell deployment in the machine vision market has been rapidly growing. This trend involves integrating robots with machine vision technology to enhance efficiency, quality control, flexibility, labor savings, and 24/7 operation in various industries. It reflects the ongoing shift towards automation and advanced vision systems for industrial applications.

“Hardware components segment accounted for the largest share of the Machine vision market in 2022.”

The machine vision market has experienced rapid growth in hardware components, with

advances in sensors, cameras, and processing units. These components have become more powerful, compact, and cost-effective, enabling improved image capture and analysis for applications like industrial automation, robotics, and quality control.

“PC-based Machine vision System segment accounted for the largest share of the Machine vision market in 2022.”

PC-based machine vision systems are thriving, thanks to their evolution in hardware, software, and AI algorithms. Their momentum is steered by heightened processing potential, cost-efficiency, adaptability, and prowess in managing intricate visual challenges. Industries spanning manufacturing, quality assurance, and robotics are embracing these systems, propelling their ascendancy.

“Foods & Packaging is likely to grow at highest CAGR in forecast period (2023-2028)”

Machine vision has rapidly expanded in the food and packaging industry, enhancing quality control and efficiency. Automated inspection systems detect defects, ensure accurate labeling, and monitor product integrity. This technology streamlines production, reduces errors, and meets stringent regulatory standards, ultimately improving product safety and customer satisfaction.

“Asia Pacific to account for the largest market size in 2022”

The Machine Vision System market in Asia Pacific has experienced an impressive surge, powered by the region's insatiable appetite for innovation and automation. A diverse range of industries, from electronics to food production, has embraced this technology for quality assurance and productivity enhancements. China's rapid technological advancements, Japan's precision engineering, and South Korea's innovative spirit are propelling the region's unique and dynamic growth in the Machine Vision System sector.

The break-up of the profiles of primary participants:

By Company Type – Tier 1 – 35%, Tier 2 – 30%, and Tier 3 – 35%

By Designation – C-level Executives – 45%, Directors – 35%, and Others – 20%

By Region – North America - 35%, Europe – 25%, Asia Pacific – 30%, RoW- 10%

The major players in the market are Cognex Corporation (US), Basler AG (Germany), Keyence Corporation (Japan), Teledyne Technologies (US), TKH Group (Netherland)

Research Coverage:

The Machine vision market has been segmented into Deployment, Components, Product, Industry, and region. The Machine vision market was studied in North America, Europe, Asia Pacific, and the Rest of the World (RoW). The report describes the major drivers, restraints, challenges, and opportunities of the Machine vision market and forecasts the same till 2028. Apart from these, the report also consists of leadership mapping and analysis of all the companies included in the Machine vision ecosystem.

Key Benefits of Buying the Report:

The report will help market leaders/new entrants with information on the closest approximations of the revenue numbers for the Machine vision market and the subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies. The report also helps stakeholders understand the market pulse and provides information on key market drivers, restraints, challenges, and opportunities.

Analysis of Key Drivers (Growing need for quality control and automated inspection in manufacturing sector, Increasing installation of vision-guided robotic systems in various sectors, Rising need for safety and enhancing product quality in industrial sector), restraints (Vulnerability of industrial robotic systems to cyberattacks, Lack of skilled professionals in manufacturing factories), Opportunities (Adoption of machine vision systems in food & beverage industry, Government-led initiatives to support industrial automation, Increasing use of AI-based systems in manufacturing and non-manufacturing applications, Integration of Industry 4.0 technologies into manufacturing processes, Emergence of miniature smart cameras and processors, Increasing demand for hybrid and electric vehicles), Challenges (Complexities associated with machine vision system integration, Lack of awareness about rapidly changing machine vision technology).

Product Development/Innovation: Detailed insights on research & development activities and new product launches in the Machine vision market.

Market Development: Comprehensive information about lucrative markets – the report analyses the Machine vision market across varied regions.

Market Diversification: Exhaustive information about new products, untapped geographies, recent developments, and investments in the Machine vision market.

Competitive Assessment: In-depth assessment of market shares, growth strategies, and product offerings of leading players like Cognex Corporation (US), Basler AG (Germany), Omron Corporation (Japan), National Instrument Corporation (US), Keyence Corporation (Japan), Teledyne Technologies (US), Sick AG (Germany), TKH Group (Netherland), Sony Corporation (Japan), Texas Instruments Incorporated (US), Intel Corporation (US), Atlas Copco (Sweden), Microsoft (US) among others in the Machine vision market.

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