

AI in Physical Security Market – Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Component (Solutions, Services (Managed Services, Professional Services)) By Technology (Machine Learning, Natural Language Processing, Context Aware Computing, Computer Vision) By Deployment (On Premise, Cloud) By Function (Video Surveillance, Access Control, Intrusion Detection, Crowd Monitoring, Robot & Drone Surveillance) By End-Use (Residential, Commercial, Military & Defense, Manufacturing, Others) By Region & Competition, 2021-2031F

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Abstracts

The global market for AI in physical security is projected to expand significantly, rising from USD 5.71 Billion in 2025 to USD 10.98 Billion by 2031, demonstrating an 11.51% Compound Annual Growth Rate (CAGR). This domain involves integrating machine learning algorithms and computer vision within surveillance and access control systems to automate threat detection and situational analysis. Key factors fueling this growth include the rapid surge in video data, which makes manual oversight impractical, and the urgent requirement for real-time risk evaluation to enhance incident response speed. These operational demands drive organizations to implement automated systems capable of managing extensive data flows without constant human supervision.

Reflecting this trend, ASIS International reported that in 2025, 57% of security

professionals were already employing at least one AI tool in their security operations. However, a major obstacle hindering market expansion is the rigorous regulatory environment surrounding data privacy and the ethical handling of sensitive biometric information, which imposes considerable compliance obligations on companies deploying these advanced technologies.

Market Driver

Increasing global incidents of crime, terrorism, and civil unrest are fundamentally pressuring organizations to upgrade their security measures using artificial intelligence. As threats grow in frequency and complexity, traditional security systems based on passive observation prove inadequate for swift intervention. Therefore, businesses are deploying AI analytics to detect early signs of incidents and coordinate rapid responses to safeguard assets and personnel. The urgency of this situation is highlighted by the National Retail Federation's 'Impact of Theft & Violence 2025' report from October 2025, which indicated an 18% rise in the average annual number of shoplifting incidents for retailers in 2024 compared to the preceding year, emphasizing the acute need for intelligent detection systems.

Concurrently, the growing demand for automated security operations to reduce human error is further fueling market expansion. Manual video surveillance is prone to operator fatigue and overlooked critical events, whereas AI-driven automation guarantees consistent and accurate situational awareness without performance decline. This operational necessity is translating into concrete adoption strategies; Genetec's '2025 State of Physical Security Report' from December 2024 revealed that 37% of end users intended to implement AI-powered features in 2025, a significant jump from just 10% in 2024. The industry's dedication to this shift is evident, with the Security Industry Association's '2025 Security Megatrends' report, also from December 2024, stating that 91% of security solution developers are directing their R&D investments toward AI technologies.

Market Challenge

The rigorous regulatory environment surrounding data privacy and the ethical deployment of biometric information poses a substantial obstacle to the growth of the AI in physical security market. As businesses incorporate machine learning into their surveillance and access control systems, they must adhere to strict legal requirements concerning the collection and processing of sensitive personal data. This intricate compliance landscape compels organizations to allocate considerable resources to

legal assessments and risk management, rather than focusing solely on operational implementation. The threat of significant financial penalties and damage to reputation from privacy breaches leads corporate leaders to proceed with extreme caution, thereby prolonging procurement timelines and delaying the broad adoption of automated security solutions.

This reluctance is substantiated by industry figures that demonstrate the deep concern among professionals overseeing these technologies. In 2025, ISACA reported that 69% of digital trust professionals identified privacy violations as a primary risk associated with artificial intelligence implementations. Such widespread apprehension regarding data protection directly impedes market expansion, as companies defer adoption to ensure their systems can meet increasingly stringent global privacy regulations.

Market Trends

A significant structural shift is occurring in the market towards decentralized edge AI processing architectures, primarily due to the technical and financial constraints associated with relying on centralized cloud infrastructure. With the proliferation of high-definition video streams, the latency and bandwidth demands for transmitting raw data to the cloud have become unmanageable for achieving real-time threat responses. As a result, organizations are transferring analytics workloads directly to edge devices, which facilitates immediate local decision-making and substantially lowers operational costs. This transition is also driven by the excessive scaling expenses of centralized models; i-PRO's 'i-PRO Predicts Edge AI, Education and Cybersecurity Growth in 2026' report from December 2025 noted that cloud-only analytics can cost hundreds of dollars per camera per month at scale, a financial reality that is accelerating the adoption of edge-based generative AI.

In parallel, the industry is experiencing a swift expansion of video analytics into operational business intelligence, transforming security infrastructure into a valuable source of organizational insights. Beyond conventional surveillance, AI-powered systems are increasingly employed to analyze customer behavior, streamline staffing operations, and monitor facility occupancy, thereby connecting security functions with broader operational goals. This desire for versatile utility is influencing procurement decisions; Genetec's '2026 State of Physical Security Report' from December 2025 indicated that 51% of end users identified access to new operational features as a primary reason for replacing their older systems, highlighting the market's move toward multifunctional solutions that offer actionable business intelligence in addition to risk reduction.

Key Market Players

Honeywell International Inc.

Robert Bosch GmbH

Teledyne Technologies Inc.

Hikvision Digital Technology Co., Ltd.

Dahua Technology Co., Ltd.

Johnson Controls International plc

Axis Communications AB

Motorola Solutions company

Genetec Inc.

Hanwha Techwin Co., Ltd.

Report Scope

In this report, the Global AI in Physical Security Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

AI in Physical Security Market, By Component

Solutions

Services

AI in Physical Security Market, By Technology

Machine Learning

Natural Language Processing

Context Aware Computing

Computer Vision

AI in Physical Security Market, By Deployment

On Premise

Cloud

AI in Physical Security Market, By Function

Video Surveillance

Access Control

Intrusion Detection

Crowd Monitoring

Robot & Drone Surveillance

AI in Physical Security Market, By End-Use

Residential

Commercial

Military & Defense

Manufacturing

Others

AI in Physical Security Market, By Region

North America

United States

Canada

Mexico

Europe

France

United Kingdom

Italy

Germany

Spain

Asia Pacific

China

India

Japan

Australia

South Korea

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global AI in Physical Security Market.

Available Customizations:

Global AI in Physical Security Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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