

# **X-ray Security Screening Market Assessment, By Component [Solution, Services], By Application [Baggage Screening, Cargo Screening, People Screening, Vehicle Screening], By Enterprise Size [Large Enterprises, Small and Medium Enterprises], By Industry Verticals [Aviation Security, Maritime Security, Border Security, Critical Infrastructure Security], By Region, Opportunities and Forecast, 2017-2031F**

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## **Abstracts**

X-ray security screening market is projected to witness a CAGR of 8.2% during the forecast period 2024-2031, growing from USD 3.76 billion in 2023 to USD 7.06 billion in 2031. The X-ray security screening market is experiencing robust growth due to increasing global security concerns. Rising threats have propelled the demand for advanced screening technologies at airports, border crossings, and public venues. Technological innovations, such as improved imaging capabilities and automatic threat detection, drive X-ray security screening market expansion. Moreover, the integration of artificial intelligence (AI) enhances screening efficiency. The surge in international travel and stringent regulatory measures also contribute to sustained market growth. The X-ray security screening market is poised for continued expansion as governments and private sectors prioritize security, presenting lucrative opportunities for industry players in the evolving landscape.

The global surge in travel significantly boosts the X-ray security screening market. Increasing travel volumes, particularly at airports and border crossings is resulting in surging demand for robust security measures. Governments and transportation

authorities globally are investing in advanced X-ray screening technologies to ensure thorough baggage inspection and elevate passenger safety standards. There's a sustained push for innovation in screening systems with the continuous growth of international tourism and evolving security regulations. The dynamic threat landscape further underscores the importance of ongoing advancements. As a result, the expanding travel sector is a pivotal factor, creating a lucrative landscape for X-ray security screening market participants to meet the rising need for efficient and dependable security solutions.

For instance, in March 2023, a new high-tech X-ray screening system for holding luggage was introduced in Palermo, which delivers faster and safer airport baggage check operations. The system is TSA 7.2-certified and meets ECAC standards 3.0 and 3.1.

### Rising Trend in Cross-border Trade Propelling the Growth in X-ray Security Screening Market

The expansion of cross-border trade catalyzes increased investment and demand in the X-ray security screening market. Due to a surge in global trade activities, there's an increased need to safeguard goods in transit against potential threats. X-ray security screening plays a pivotal role in ensuring the security and integrity of shipments. Governments and businesses invest significantly in advanced screening technologies to detect contraband, explosives, or other illicit materials that might compromise supply chain security. The efficiency of X-ray systems in inspecting a wide range of cargo, from containers to packages, makes them indispensable in facilitating smooth cross-border trade while meeting stringent security standards. This intersection of commerce and security underscores the vital role of X-ray screening, making it a focal point for continued market growth.

For instance, in March 2023, Rapiscan Systems, a global leader in security inspection systems, introduced the 935DX, a new model in its expanding series of ORION™ X-ray screening equipment. The 935DX, one of the market's largest tunneled conveyor systems, is primarily used for screening air cargo and pallets.

### AI Integration Fueling X-ray Security Screening Market

The integration of AI into X-ray security screening systems is a key driver for increased investment and demand in the X-ray security screening market. AI enhances screening efficiency by enabling machines to learn and adapt, improving threat detection

accuracy. Machine learning (ML) algorithms can rapidly analyze complex X-ray images, distinguishing between harmless items and potential threats with high precision. This capability reduces false positives and streamlines security procedures, making the screening process more efficient. Thus, the demand for intelligent screening solutions grows as security threats evolve. Governments, airports, and other security-sensitive entities invest in AI-integrated X-ray systems to stay ahead of emerging threats, creating a strong impetus for sustained market expansion and technological advancements.

For example, in February 2023, Smiths Detection, a global pioneer in danger detection and security screening technology, announced the release of iCMORE Prohibited Items, its latest automated detection algorithm. It utilizes AI-based algorithms to automatically detect prohibited objects, such as knives, firearms, axes, scissors, blasting caps, ammunition, and grenades, determined to be a security risk at airports.

### Consumer Electronics Security Drives the X-ray Security Screening Market

The surge in demand for X-ray security screening is particularly pronounced in response to the imperative to screen consumer electronics for potential threats in public spaces and transportation hubs. With the pervasive use of smartphones, laptops, and other electronic devices, there's a critical need to ensure the security of these items. X-ray security screening solutions play a vital role in meticulously examining electronic devices for concealed threats, such as explosive materials, leveraging advanced imaging technologies. Airports and transportation authorities worldwide are investing significantly in cutting-edge X-ray systems that provide detailed scans to enhance threat detection accuracy. This targeted application of X-ray security screening underscores its pivotal role in fortifying security measures in the face of evolving technological risks, thus driving substantial market growth.

For instance, in March 2023, Smiths Detection, a global pioneer in danger detection and security screening technologies, announced the release of the Lightweight Chemical Detector (LCD) 4 and the LCD XID extension. The LCD's detection capabilities will be expanded to encompass street drugs, explosives, medicines, and other highly dangerous chemical threats.

### Asia-Pacific is Gaining Traction in X-ray Security Screening Market

Asia-Pacific is emerging as a pivotal player in the X-ray security screening market, driven by specific factors unique to the region. Increasing air travel in countries like

China and India, coupled with the rapid growth of e-commerce and cross-border trade, intensifies the need for robust security measures. Governments in the region, notably China and Japan, are proactively investing in state-of-the-art X-ray screening technologies to address evolving security challenges. Heightened geopolitical tensions and a growing awareness of the importance of security further propel this trend. Asia-Pacific's dynamic economic landscape and strategic initiatives contribute to its gaining traction in the global X-ray security screening market, positioning it as a key growth hub.

For instance, in November 2023, OSI Systems, Inc., with a renowned presence in Asia-Pacific, revealed that its Security operations had secured a USD 18 million contract from an international airport to supply different checkpoints and hold baggage screening solutions. The RTT110 (real-time tomography) explosive detection system for screening hold luggage, Metor Walk-Through Metal Detector, and Itemiser 5X explosive trace detection system for secondary screening of passengers are among the equipment to be delivered.

### Government Initiatives Are Fostering Revenue Growth

Government initiatives are instrumental in propelling X-ray security screening market revenue growth. With an increasing focus on national security and counter-terrorism measures, governments globally are channeling significant investments into advanced screening technologies. Stricter regulatory frameworks and mandates for heightened security at airports, public venues, and border checkpoints create a robust demand for sophisticated X-ray security solutions. Public-private collaborations and government funding programs further stimulate research and development (R&D) efforts, fostering technological advancements. As security threats evolve, governments actively seek innovative screening solutions, driving sustained market expansion. This dynamic interplay of government support, regulatory mandates, and the imperative for cutting-edge security measures positions the X-ray security screening market for continued growth and substantial revenue opportunities.

For instance, in November 2023, Homeland Security Secretary of the United States announced groundbreaking initiatives to address evolving threats, unveiling the Department's first-ever AI Task Force and a 90-day sprint to counter People's Republic of China (PRC) threats. The AI Task Force aims to integrate AI into critical homeland security missions, such as enhancing supply chain integrity and countering the flow of fentanyl.

### Impact of COVID-19

The X-ray security screening market exhibited consistent growth, driven by escalating global travel and heightened security concerns in pre-COVID-19. However, the advent of the pandemic precipitated a significant downturn. Travel restrictions and lockdown measures led to a temporary contraction in demand, particularly as airports and public venues curtailed operations. In the post-COVID-19 landscape, the X-ray security screening market is undergoing a resurgence. The pandemic served as a stark reminder of the critical role robust screening measures play in ensuring public safety. With the gradual resumption of travel and reopening of public spaces, there is a renewed focus on upgrading security infrastructure. Furthermore, advancements influenced by the pandemic, including the integration of touchless technologies, position the X-ray security screening market for a resilient recovery and sustained growth as security measures adapt to the evolving challenges of the COVID-19 era.

### Impact of Russia-Ukraine War

The Russia-Ukraine war has significantly impacted the X-ray security screening market. The rise in global security concerns due to geopolitical tensions led to increased investments in advanced screening technologies. Nations are enhancing their security infrastructure, creating a heightened demand for effective X-ray security solutions at border crossings, transportation hubs, and critical locations. The conflict has accelerated the need for stringent security measures to address potential threats, driving increased demand for X-ray security screenings. As countries prioritize security amidst geopolitical uncertainties, the X-ray security screening market is experiencing a notable surge, shaping a dynamic and evolving landscape for the market.

For Instance, in February 2023, 3DX-RAY's AXIS system is aiding a Ukraine humanitarian refugee relief program, offering exceptional scanning capabilities for bulkier items. Compact and user-friendly, it excels in providing high-quality imaging and rapid interpretation for efficient relief operations.

### Key Players Landscape and Outlook

Key players in the X-ray security screening market, including 3DX-RAY, Bavak Beveiligingsgroep BV, GILARDONI S.P.A., Rapiscan Systems, Inc., and Scanna MSC Ltd, are known for innovation. These companies drive market trends by introducing cutting-edge technologies and maintaining high-quality screening solutions. Their commitment to advancing threat detection capabilities and adhering to international security standards positions them as market benchmarks. As security concerns persist

and global trade expands, the outlook for the X-ray security screening market remains robust. The continued focus on research and development (R&D), coupled with strategic partnerships, ensures these key players maintain a significant influence on the market's trajectory and growth.

In September 2023, Leidos partnered with Sofia Airport in Bulgaria to update its hold baggage screening equipment with cutting-edge technology. This unique project is intended to comply with the most recent European laws, highlighting the airport's dedication to passenger safety and efficiency.

In January 2023, Rapiscan Systems Inc. acquired all assets of VOTI Detection Inc., integrating technical support into its global service organization. Notably, due to VOTI's bankruptcy, former contractual obligations and warranties don't transfer. Rapiscan aims to ensure continued support through renewed capabilities and a re-established global partner network.

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\*Companies mentioned above DO NOT hold any order as per market share and can be changed as per information available during research work.

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