

# **Global Handheld X-rays Market Size study, by Device Type (Backscatter X-Ray, C-arm X-Ray, True DR Handheld X-Ray), by Intended Use (Industrial, Medical, Security & Defense), by Applications (Security Screening, Cargo Inspection, Medical Diagnostics, Construction, Non-Destructive Testing), and Regional Forecasts 2022-2032**

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## **Abstracts**

The Global Handheld X-rays Market is valued at approximately USD 4.22 billion in 2023 and is anticipated to expand at a promising CAGR of 9.32% during the forecast period from 2024 to 2032. Handheld X-ray devices, once considered peripheral in conventional imaging, have swiftly risen to prominence by merging portability with diagnostic precision. These compact, powerful instruments are redefining point-of-care imaging by enabling immediate, on-the-go diagnostics across diverse industries—ranging from emergency trauma care and battlefield applications to airport security and structural inspections in construction. Their evolution from bulky room-based equipment to agile, battery-operated systems has revolutionized accessibility and transformed frontline diagnostic workflows across healthcare and non-healthcare sectors alike.

The market's growth trajectory is being propelled by a combination of factors: the surging demand for rapid diagnostic solutions in emergency settings, growing military and defense applications, and the expansion of mobile medical services, particularly in under-resourced geographies. In parallel, the proliferation of minimally invasive medical technologies has catalyzed the adoption of handheld X-rays in dental imaging, orthopedics, and surgical planning. The innovation landscape is thriving with developments such as real-time image processing, cloud-integrated devices, and wireless functionalities, which are unlocking new efficiencies and enhancing diagnostic

outcomes. However, challenges such as stringent radiation safety regulations, device calibration complexities, and limited penetration in price-sensitive regions may impede widespread adoption in the near term.

The growing integration of AI and digital radiography into handheld X-ray systems is fueling a transformative shift in how data is captured, analyzed, and interpreted. These advancements are empowering clinicians and technicians with instant insights while eliminating the latency of traditional image processing. Furthermore, cross-industry applications are expanding—construction firms are using handheld X-rays for non-destructive testing (NDT) of materials, and security agencies are deploying them for concealed weapon detection and cargo screening. This convergence of use cases, coupled with the versatility of newer device types like True DR and backscatter X-ray technologies, is broadening the addressable market beyond traditional medical boundaries.

North America dominates the handheld X-rays landscape, underpinned by sophisticated healthcare infrastructure, early technology adoption, and strong defense-sector integration. The U.S., particularly, is at the forefront, owing to expansive R&D funding, favorable regulatory frameworks, and rising demand for mobile diagnostic imaging. Europe follows closely, with Germany, the UK, and France emphasizing radiological innovation and workplace safety applications. Meanwhile, Asia Pacific is projected to witness the fastest growth, spurred by rapid urbanization, increasing healthcare access, and growing industrial deployment across China, India, Japan, and Southeast Asia. The region's low-cost manufacturing advantage also makes it an incubator for affordable innovations aimed at global markets.

**Major market player included in this report are:**

Vatech Co., Ltd.

Carestream Health Inc.

KA Imaging Inc.

Teledyne Technologies Incorporated

Dexcowin Co. Ltd.

Canon Inc.

Shimadzu Corporation

Genoray Co., Ltd.

Digiray Corporation

Acteon Group Ltd.

MinXray, Inc.

Source-Ray Inc.

Poskom Co., Ltd.

Xoran Technologies

Visaris d.o.o.

**The detailed segments and sub-segment of the market are explained below:**

By Device Type

Backscatter X-Ray

C-arm X-Ray

True DR Handheld X-Ray

By Intended Use

Industrial

Medical

Security & Defense

## By Applications

Security Screening

Cargo Inspection

Medical Diagnostics

Construction

Non-Destructive Testing

## By Region:

### North America

U.S.

Canada

### Europe

UK

Germany

France

Spain

Italy

Rest of Europe

### Asia Pacific

China

India

Japan

Australia

South Korea

Rest of Asia Pacific

Latin America

Brazil

Mexico

Middle East & Africa

Saudi Arabia

South Africa

Rest of Middle East & Africa

**Years considered for the study are as follows:**

Historical year – 2022

Base year – 2023

Forecast period – 2024 to 2032

**Key Takeaways:**

*Global Handheld X-rays Market Size study, by Device Type (Backscatter X-Ray, C-arm X-Ray, True DR Handheld X-R...*

Market Estimates & Forecast for 10 years from 2022 to 2032.

Annualized revenues and regional level analysis for each market segment.

Detailed analysis of geographical landscape with Country level analysis of major regions.

Competitive landscape with information on major players in the market.

Analysis of key business strategies and recommendations on future market approach.

Analysis of competitive structure of the market.

Demand side and supply side analysis of the market.

#### Companies Mentioned

Vatech Co., Ltd.

Carestream Health Inc.

KA Imaging Inc.

Teledyne Technologies Incorporated

Dexcowin Co. Ltd.

Canon Inc.

Shimadzu Corporation

Genoray Co., Ltd.

Digiray Corporation

Acteon Group Ltd.

MinXray, Inc.

Source-Ray Inc.

Poskom Co., Ltd.

Xoran Technologies

Visaris d.o.o.

## Contents

### **CHAPTER 1. GLOBAL HANDHELD X-RAYS MARKET EXECUTIVE SUMMARY**

- 1.1. Global Handheld X-rays Market Size & Forecast (2022-2032)
- 1.2. Regional Summary
- 1.3. Segmental Summary
  - 1.3.1. By Device Type
  - 1.3.2. By Intended Use
  - 1.3.3. By Application
- 1.4. Key Trends
- 1.5. Recession Impact
- 1.6. Analyst Recommendation & Conclusion

### **CHAPTER 2. GLOBAL HANDHELD X-RAYS MARKET DEFINITION AND RESEARCH ASSUMPTIONS**

- 2.1. Research Objective
- 2.2. Market Definition
- 2.3. Research Assumptions
  - 2.3.1. Inclusion & Exclusion
  - 2.3.2. Limitations
  - 2.3.3. Supply Side Analysis
    - 2.3.3.1. Availability
    - 2.3.3.2. Infrastructure
    - 2.3.3.3. Regulatory Environment
    - 2.3.3.4. Market Competition
    - 2.3.3.5. Economic Viability (Provider/Payer Perspective)
  - 2.3.4. Demand Side Analysis
    - 2.3.4.1. Regulatory Frameworks
    - 2.3.4.2. Technological Advancements
    - 2.3.4.3. Application Diversification
    - 2.3.4.4. Adoption in Emerging Markets
- 2.4. Estimation Methodology
- 2.5. Years Considered for the Study
- 2.6. Currency Conversion Rates

### **CHAPTER 3. GLOBAL HANDHELD X-RAYS MARKET DYNAMICS**

### 3.1. Market Drivers

- 3.1.1. Rising Demand for Point-of-Care and Mobile Diagnostics
- 3.1.2. Expansion into Non-Medical Sectors (Security, Industrial NDT)
- 3.1.3. Advances in Digital Radiography and AI Integration

### 3.2. Market Challenges

- 3.2.1. Stringent Radiation Safety Regulations
- 3.2.2. Higher Price Points Limiting Penetration in Price-Sensitive Markets

### 3.3. Market Opportunities

- 3.3.1. Growth in Emerging Economies with Expanding Infrastructure
- 3.3.2. Cross-Industry Applications in Construction and Cargo Inspection
- 3.3.3. Collaborations for Device Miniaturization and Connectivity

## **CHAPTER 4. GLOBAL HANDHELD X-RAYS MARKET INDUSTRY ANALYSIS**

### 4.1. Porter's Five Forces Model

- 4.1.1. Bargaining Power of Suppliers
- 4.1.2. Bargaining Power of Buyers
- 4.1.3. Threat of New Entrants
- 4.1.4. Threat of Substitutes
- 4.1.5. Competitive Rivalry

### 4.2. PESTEL Analysis

- 4.2.1. Political
- 4.2.2. Economic
- 4.2.3. Social
- 4.2.4. Technological
- 4.2.5. Environmental
- 4.2.6. Legal

### 4.3. Top Investment Opportunities

### 4.4. Top Winning Strategies

### 4.5. Disruptive Trends

### 4.6. Industry Expert Perspective

### 4.7. Analyst Recommendation & Conclusion

## **CHAPTER 5. GLOBAL HANDHELD X-RAYS MARKET SIZE & FORECASTS BY DEVICE TYPE 2022-2032**

### 5.1. Segment Dashboard

### 5.2. Device Type Revenue Trend Analysis, 2022 & 2032 (USD Billion)

- 5.2.1. Backscatter X-Ray

- 5.2.2. C-arm X-Ray
- 5.2.3. True DR Handheld X-Ray

## **CHAPTER 6. GLOBAL HANDHELD X-RAYS MARKET SIZE & FORECASTS BY INTENDED USE 2022-2032**

- 6.1. Segment Dashboard
- 6.2. Intended Use Revenue Trend Analysis, 2022 & 2032 (USD Billion)
  - 6.2.1. Industrial
  - 6.2.2. Medical
  - 6.2.3. Security & Defense

## **CHAPTER 7. GLOBAL HANDHELD X-RAYS MARKET SIZE & FORECASTS BY APPLICATIONS 2022-2032**

- 7.1. Segment Dashboard
- 7.2. Application Revenue Trend Analysis, 2022 & 2032 (USD Billion)
  - 7.2.1. Security Screening
  - 7.2.2. Cargo Inspection
  - 7.2.3. Medical Diagnostics
  - 7.2.4. Construction
  - 7.2.5. Non-Destructive Testing

## **CHAPTER 8. GLOBAL HANDHELD X-RAYS MARKET SIZE & FORECASTS BY REGION 2022-2032**

- 8.1. North America Market
  - 8.1.1. U.S. Market
  - 8.1.2. Canada Market
- 8.2. Europe Market
  - 8.2.1. UK Market
  - 8.2.2. Germany Market
  - 8.2.3. France Market
  - 8.2.4. Spain Market
  - 8.2.5. Italy Market
  - 8.2.6. Rest of Europe Market
- 8.3. Asia Pacific Market
  - 8.3.1. China Market
  - 8.3.2. India Market

- 8.3.3. Japan Market
- 8.3.4. Australia Market
- 8.3.5. South Korea Market
- 8.3.6. Rest of Asia Pacific Market
- 8.4. Latin America Market
  - 8.4.1. Brazil Market
  - 8.4.2. Mexico Market
  - 8.4.3. Rest of Latin America Market
- 8.5. Middle East & Africa Market
  - 8.5.1. Saudi Arabia Market
  - 8.5.2. South Africa Market
  - 8.5.3. Rest of Middle East & Africa Market

## **CHAPTER 9. COMPETITIVE INTELLIGENCE**

- 9.1. Key Company SWOT Analysis
  - 9.1.1. Vatech Co., Ltd.
  - 9.1.2. Carestream Health Inc.
  - 9.1.3. KA Imaging Inc.
- 9.2. Top Market Strategies
- 9.3. Company Profiles
  - 9.3.1. Vatech Co., Ltd.
    - 9.3.1.1. Key Information
    - 9.3.1.2. Overview
    - 9.3.1.3. Financial (Subject to Data Availability)
    - 9.3.1.4. Product Summary
    - 9.3.1.5. Market Strategies
  - 9.3.2. Carestream Health Inc.
  - 9.3.3. KA Imaging Inc.
  - 9.3.4. Teledyne Technologies Incorporated
  - 9.3.5. Dexcowin Co. Ltd.
  - 9.3.6. Canon Inc.
  - 9.3.7. Shimadzu Corporation
  - 9.3.8. Genoray Co., Ltd.

## **CHAPTER 10. RESEARCH PROCESS**

- 10.1. Research Process
  - 10.1.1. Data Mining

- 10.1.2. Analysis
- 10.1.3. Market Estimation
- 10.1.4. Validation
- 10.1.5. Publishing
- 10.2. Research Attributes

## List Of Tables

### LIST OF TABLES

- TABLE 1. Global Handheld X-rays market, report scope
- TABLE 2. Global market estimates & forecasts by Region 2022-2032 (USD Billion)
- TABLE 3. Global market estimates & forecasts by Device Type 2022-2032 (USD Billion)
- TABLE 4. Global market estimates & forecasts by Intended Use 2022-2032 (USD Billion)
- TABLE 5. Global market estimates & forecasts by Application 2022-2032 (USD Billion)
- TABLE 6. Global market by segment, historical vs forecast, 2022-2032 (USD Billion)
- TABLE 7. U.S. market estimates & forecasts, 2022-2032 (USD Billion)
- TABLE 8. Canada market estimates & forecasts, 2022-2032 (USD Billion)
- TABLE 9. UK market estimates & forecasts, 2022-2032 (USD Billion)
- TABLE 10. Germany market estimates & forecasts, 2022-2032 (USD Billion)
- TABLE 11. France market estimates & forecasts, 2022-2032 (USD Billion)
- TABLE 12. Spain market estimates & forecasts, 2022-2032 (USD Billion)
- TABLE 13. Italy market estimates & forecasts, 2022-2032 (USD Billion)
- TABLE 14. Asia Pacific market estimates & forecasts, 2022-2032 (USD Billion)
- TABLE 15. Latin America market estimates & forecasts, 2022-2032 (USD Billion)
- TABLE 16. Middle East & Africa market estimates & forecasts, 2022-2032 (USD Billion)
- TABLE 17. Top 10 companies market share analysis, 2023 (%)
- TABLE 18. Application adoption rates by region, 2023 (%)
- TABLE 19. Technology penetration overview, 2022 vs 2023
- TABLE 20. R&D investment trends, 2022-2032

## List Of Figures

### LIST OF FIGURES

- FIG 1. Global market research methodology
- FIG 2. Global market estimation techniques
- FIG 3. Market size estimates & forecast methods
- FIG 4. Key handheld X-ray trends, 2023
- FIG 5. Market growth prospects, 2022-2032
- FIG 6. Porter's Five Forces analysis
- FIG 7. PESTEL analysis
- FIG 8. Value chain analysis
- FIG 9. Device Type-wise market share, 2023 vs 2032
- FIG 10. Intended Use-wise market share, 2023 vs 2032
- FIG 11. Application-wise market share, 2023 vs 2032
- FIG 12. Regional market snapshot, 2022 vs 2032
- FIG 13. North America growth trajectory, 2022-2032
- FIG 14. Europe growth trajectory, 2022-2032
- FIG 15. Asia Pacific growth trajectory, 2022-2032
- FIG 16. Latin America growth trajectory, 2022-2032
- FIG 17. Middle East & Africa growth trajectory, 2022-2032
- FIG 18. AI integration impact on workflows
- FIG 19. Price vs performance benchmarking, 2023
- FIG 20. Forecast sensitivity analysis, 2022-2032

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