

# **3D Metrology Market Size, Share & Trends Analysis Report By Component (Hardware, Software, Services), By Hardware (CMM, VMM), By Application (Quality Control & Inspection, 3D Scanning), By End-use, By Region, And Segment Forecasts, 2024 - 2030**

<https://marketpublishers.com/r/3F05F9F132FEEN.html>

Date: June 2024

Pages: 150

Price: US\$ 4,950.00 (Single User License)

ID: 3F05F9F132FEEN

## **Abstracts**

This report can be delivered to the clients within 7 Business Days

### **3D Metrology Market Growth & Trends**

The global 3D metrology market size is expected to reach USD 19.51 billion by 2030, growing at a CAGR of 9.2% from 2024 to 2030, according to a new report by Grand View Research, Inc. The growing adoption of 3D data in numerous industries is boosting demand for 3D metrology systems. To enhance product development and uphold quality standards, precise measurement and analysis are crucial in several industries, including manufacturing, automotive, aerospace, heavy machinery, energy and power, and medical.

Advancements in imaging technologies, such as high-resolution cameras, structured light systems, laser scanners, and computed tomography (CT), have been integrated into 3D metrology systems through R&D efforts. For instance, in February 2024, New Scale Robotics introduced a new metrology solution that allows users to automate small-part measurement using collaborative robots (cobots), showcasing the integration of advanced imaging technology into metrology systems for precise quality control in various industrial and manufacturing applications.

Companies that provide services for electronic manufacturing are increasingly concentrating on boosting production speed while upholding strict quality standards. 3D

metrology systems enable these companies to streamline their manufacturing processes and ensure precision in their products. For instance, Intertek's 3D Metrology Services utilize cutting-edge technology to provide accurate and precise 3D measurement data crucial for success in product manufacturing across industries like aerospace, automotive, casting, medical, and oil & gas.

R&D investments play a major role in the ongoing development of 3D metrology technology. Enhancing the accuracy of 3D metrology systems is the primary goal of research and development. Experts have further enhanced the overall measurement accuracy of these systems by creating more precise sensors, advanced algorithms, and standardizing techniques. Through the development of robotic systems, artificial intelligence (AI) algorithms, machine learning techniques, and IoT connectivity, researchers have enabled seamless integration of 3D metrology into smart manufacturing workflows.

### 3D Metrology Market Report Highlights

Based on component, the hardware segment dominated the market in 2023, owing to the vital role of hardware in providing the physical tools and equipment necessary for precise measurements, quality control, and inspection processes, driving its prominence within the industry

Based on hardware, the coordinate measuring machine (CMM) segment dominated the market in 2023. This is attributed to CMM's high accuracy, repeatability, and versatility, making them essential tools for ensuring product quality and meeting industry standards.

Based on application, the quality control and inspection segment dominated the market in 2023. The increasing emphasis on quality assurance, the need for accurate measurements, and the growing demand for efficient inspection processes to maintain high standards and meet regulatory requirements are driving the segment growth.

Based on end-use, the automotive segment dominated the market in 2023 owing to the increased adoption of advanced measurement technologies like optical measurement systems and coordinate measuring machines (CMMs) in the automotive industry.

North America accounted for the largest market share in 2023. The region's

strong presence of automobile manufacturers like Ford Motors and General Motors, significant research institutes, and large semiconductor corporations have fostered the demand for 3D metrology solutions.

In February 2024, as an Authorized Systems Integrator (ASI), New Scale Robotics and FANUC Americas announced a new collaboration. By enabling the automation of manual gauging procedures, the new partnership enhances the opportunities of the FANUC system and enables manufacturers to minimize bottlenecks and enhance productivity.

## Contents

### CHAPTER 1. METHODOLOGY AND SCOPE

- 1.1. Market Segmentation & Scope
- 1.2. Market Definitions
- 1.3. Information Procurement
  - 1.3.1. Information analysis
  - 1.3.2. Market formulation & data visualization
  - 1.3.3. Data validation & publishing
  - 1.3.4. Research Scope and Assumptions
  - 1.3.5. List of Data Sources

### CHAPTER 2. EXECUTIVE SUMMARY

- 2.1. 3D Metrology Market Snapshot
- 2.2. 3D Metrology Market- Segment Snapshot (1/2)
- 2.3. 3D Metrology Market- Segment Snapshot (2/2)
- 2.4. 3D Metrology Market- Competitive Landscape Snapshot

### CHAPTER 3. 3D METROLOGY MARKET - INDUSTRY OUTLOOK

- 3.1. Market Lineage Outlook
- 3.2. Industry Value Chain Analysis
- 3.3. Market Dynamics
  - 3.3.1. Market Driver Analysis
    - 3.3.1.1. Increasing demand for high precision and accuracy in measurement
    - 3.3.1.2. Increased focus on quality control and R&D
    - 3.3.1.3. Advancements in 3D metrology systems
  - 3.3.2. Market Restraint Analysis
    - 3.3.2.1. High cost incurred for setting up 3D metrology facility
    - 3.3.2.2. Lack of technical expertise for 3D metrology systems
  - 3.3.3. Industry Challenges
  - 3.3.4. Industry Opportunities
- 3.4. Industry Analysis Tools
  - 3.4.1. Porter's five forces analysis
  - 3.4.2. Macroeconomic analysis

### CHAPTER 4. 3D METROLOGY MARKET: COMPONENT ESTIMATES & TREND

## **ANALYSIS**

- 4.1. Component Movement Analysis & Market Share, 2023 & 2030
- 4.2. 3D Metrology Market Estimates & Forecast, by Component (USD Million)
  - 4.2.1. Hardware
  - 4.2.2. Software
  - 4.2.3. Services

## **CHAPTER 5. 3D METROLOGY MARKET: HARDWARE ESTIMATES & TREND ANALYSIS**

- 5.1. Hardware Movement Analysis & Market Share, 2023 & 2030
- 5.2. 3D Metrology Market Estimates & Forecast, by Hardware (USD Million)
  - 5.2.1. Coordinate Measuring Machine (CMM)
  - 5.2.2. Optical Digitizer & Scanner (ODS)
  - 5.2.3. Video Measuring Machine (VMM)
  - 5.2.4. 3D Automated Optical Inspection (AOI) System
  - 5.2.5. Others

## **CHAPTER 6. 3D METROLOGY MARKET: APPLICATION ESTIMATES & TREND ANALYSIS**

- 6.1. Application Movement Analysis & Market Share, 2023 & 2030
- 6.2. 3D Metrology Market Estimates & Forecast, by Application (USD Million)
  - 6.2.1. Hardware
  - 6.2.2. Quality Control & Inspection
  - 6.2.3. Reverse Engineering
  - 6.2.4. Virtual Simulation
  - 6.2.5. 3D Scanning
  - 6.2.6. Others

## **CHAPTER 7. 3D METROLOGY MARKET: END-USE ESTIMATES & TREND ANALYSIS**

- 7.1. End-use Movement Analysis & Market Share, 2023 & 2030
- 7.2. 3D Metrology Market Estimates & Forecast, by End-use (USD Million)
  - 7.2.1. Aerospace & Defense
  - 7.2.2. Semiconductor & Electronics
  - 7.2.3. Automotive

- 7.2.4. Medical
- 7.2.5. Construction & Engineering
- 7.2.6. Heavy Machinery
- 7.2.7. Others

## **CHAPTER 8. REGIONAL ESTIMATES & TREND ANALYSIS**

### 8.1. 3D Metrology Market by Region, 2023 & 2030

#### 8.2. North America

8.2.1. North America 3D Metrology Market Estimates & Forecasts, 2018 - 2030 (USD Million)

8.2.2. U.S.

8.2.3. Canada

#### 8.3. Europe

8.3.1. Europe 3D Metrology Market Estimates & Forecasts, 2018 - 2030 (USD Million)

8.3.2. UK

8.3.3. Germany

8.3.4. France

8.3.5. Italy

8.3.6. Spain

8.3.7. RoE

#### 8.4. Asia Pacific

8.4.1. Asia Pacific 3D Metrology Market Estimates & Forecasts, 2018 - 2030 (USD Million)

8.4.2. China

8.4.3. Japan

8.4.4. India

8.4.5. South Korea

8.4.6. RoAPAC

#### 8.5. Latin America

8.5.1. Latin America 3D Metrology Market Estimates & Forecasts, 2018 - 2030 (USD Million)

8.5.2. Brazil

8.5.3. Mexico

8.5.4. RoLATAM

#### 8.6. Middle East & Africa (MEA)

8.6.1. MEA 3D Metrology Market Estimates & Forecasts, 2018 - 2030 (USD Million)

8.6.2. Saudi Arabia

8.6.3. South Africa

#### 8.6.4. RoMEA

### **CHAPTER 9. 3D METROLOGY MARKET - COMPETITIVE LANDSCAPE**

- 9.1. Recent Developments & Impact Analysis, By Key Market Participants
- 9.2. Company Categorization
- 9.3. Participant's Overview
- 9.4. Financial Performance
- 9.5. Product Benchmarking
- 9.6. Major Deals and Strategic Alliances Analysis
- 9.7. Key Company Categorization (Key innovators, Market leaders, Emerging players)
- 9.8. Company Market Positioning
- 9.9. Company Market Share Analysis, 2023
- 9.10. Company Heat Map Analysis
- 9.11. Strategy Mapping
  - 9.11.1. Partnerships
  - 9.11.2. New Product Launches
  - 9.11.3. Merger & Acquisition
  - 9.11.4. Expansion
- 9.12. Company Profiles
  - 9.12.1. 3D Systems Inc.
    - 9.12.1.1. Participant's Overview
    - 9.12.1.2. Financial Performance
    - 9.12.1.3. Product Benchmarking
    - 9.12.1.4. Recent Developments
  - 9.12.2. Carl Zeiss AG
    - 9.12.2.1. Participant's Overview
    - 9.12.2.2. Financial Performance
    - 9.12.2.3. Product Benchmarking
    - 9.12.2.4. Recent Developments
  - 9.12.3. Carl Zeiss GOM Metrology
    - 9.12.3.1. Participant's Overview
    - 9.12.3.2. Financial Performance
    - 9.12.3.3. Product Benchmarking
    - 9.12.3.4. Recent Developments
  - 9.12.4. Carmar Accuracy Co.Ltd
    - 9.12.4.1. Participant's Overview
    - 9.12.4.2. Financial Performance
    - 9.12.4.3. Product Benchmarking

- 9.12.4.4. Recent Developments
- 9.12.5. Creaform
  - 9.12.5.1. Participant's Overview
  - 9.12.5.2. Financial Performance
  - 9.12.5.3. Product Benchmarking
  - 9.12.5.4. Recent Developments
- 9.12.6. Faro Technologies Inc
  - 9.12.6.1. Participant's Overview
  - 9.12.6.2. Financial Performance
  - 9.12.6.3. Product Benchmarking
  - 9.12.6.4. Recent Developments
- 9.12.7. Heliotis AG
  - 9.12.7.1. Participant's Overview
  - 9.12.7.2. Financial Performance
  - 9.12.7.3. Product Benchmarking
  - 9.12.7.4. Recent Developments
- 9.12.8. Hexagon AB
  - 9.12.8.1. Participant's Overview
  - 9.12.8.2. Financial Performance
  - 9.12.8.3. Product Benchmarking
  - 9.12.8.4. Recent Developments
- 9.12.9. Intertek Group Plc
  - 9.12.9.1. Participant's Overview
  - 9.12.9.2. Financial Performance
  - 9.12.9.3. Product Benchmarking
  - 9.12.9.4. Recent Developments
- 9.12.10. Keyence
  - 9.12.10.1. Participant's Overview
  - 9.12.10.2. Financial Performance
  - 9.12.10.3. Product Benchmarking
  - 9.12.10.4. Recent Developments
- 9.12.11. Langley Holdings
  - 9.12.11.1. Participant's Overview
  - 9.12.11.2. Financial Performance
  - 9.12.11.3. Product Benchmarking
  - 9.12.11.4. Recent Developments
- 9.12.12. Metrologic Group
  - 9.12.12.1. Participant's Overview
  - 9.12.12.2. Financial Performance



- 9.12.12.3. Product Benchmarking
- 9.12.12.4. Recent Developments
- 9.12.13. Nikon Corporation
  - 9.12.13.1. Participant's Overview
  - 9.12.13.2. Financial Performance
  - 9.12.13.3. Product Benchmarking
  - 9.12.13.4. Recent Developments
- 9.12.14. Renishaw Group
  - 9.12.14.1. Participant's Overview
  - 9.12.14.2. Financial Performance
  - 9.12.14.3. Product Benchmarking
  - 9.12.14.4. Recent Developments
- 9.12.15. WENZEL Group
  - 9.12.15.1. Participant's Overview
  - 9.12.15.2. Financial Performance
  - 9.12.15.3. Product Benchmarking
  - 9.12.15.4. Recent Developments
- 9.12.16. Zygo Corporation
  - 9.12.16.1. Participant's Overview
  - 9.12.16.2. Financial Performance
  - 9.12.16.3. Product Benchmarking
  - 9.12.16.4. Recent Developments

## List Of Tables

### LIST OF TABLES

Table 1 3D Metrology Market - Industry Snapshot & Key Buying Criteria, 2018 - 2030

Table 2 Key Market Driver Impact

Table 3 Key Market Restraint Impact

Table 4 Key Market Opportunity Impact

Table 5 Global 3D Metrology Market, 2018 - 2030 (USD Million)

Table 6 Global 3D Metrology Market, By Region, 2018 - 2030 (USD Million)

Table 7 Global 3D Metrology Market, By Component, 2018 - 2030 (USD Million)

Table 8 Global 3D Metrology Market, By Hardware, 2018 - 2030 (USD Million)

Table 9 Global 3D Metrology Market, By Application, 2018 - 2030 (USD Million)

Table 10 Global 3D Metrology Market, By End-use, 2018 - 2030 (USD Million)

Table 11 Recent Developments & Impact Analysis, By Key Market Participants

Table 12 Company Market Share, 2023

Table 13 Company Heat Map Analysis

Table 14 Key Companies Undergoing Expansions

Table 15 Key Companies Involved in Merger & Acquisitions

Table 16 Key Companies Undergoing Collaborations

Table 17 Key Companies Launching New Products

Table 18 Key Companies Divesture/Discontinuation

## List Of Figures

### LIST OF FIGURES

- Fig. 1 Market segmentation and scope
- Fig. 2 Information Procurement
- Fig. 3 Data Analysis Models
- Fig. 4 Market Formulation and Validation
- Fig. 5 Data Validating & Publishing
- Fig. 6 Market Snapshot
- Fig. 7 Segment Snapshot (1/2)
- Fig. 8 Segment Snapshot (2/2)
- Fig. 9 Competitive Landscape Snapshot
- Fig. 10 Global 3D Metrology market, 2018 - 2030 (USD Million)
- Fig. 11 3D Metrology Market - Value Chain Analysis
- Fig. 12 3D Metrology Market - Market Dynamics
- Fig. 13 3D Metrology Market - Porter's Five Forces Analysis
- Fig. 14 3D Metrology Market - PESTEL Analysis
- Fig. 15 3D Metrology Market, By Component: Key Takeaways
- Fig. 16 3D Metrology Market, By Component: Market Share, 2023 & 2030
- Fig. 17 Hardware 3D Metrology Market Estimates & Forecasts, 2018 - 2030 (USD Million)
- Fig. 18 Non-Hardware 3D Metrology Market Estimates & Forecasts, 2018 - 2030 (USD Million)
- Fig. 19 3D Metrology Market, By Hardware : Key Takeaways
- Fig. 20 3D Metrology Market, By Hardware : Market Share, 2023 & 2030
- Fig. 21 Coordinate Measuring Machine (CMM) 3D Metrology Market Estimates & Forecasts, 2018 - 2030 (USD Million)
- Fig. 22 Optical Digitizer & Scanner (ODS) 3D Metrology Market Estimates & Forecasts, 2018 - 2030 (USD Million)
- Fig. 23 Video Measuring Machine (VMM) 3D Metrology Market Estimates & Forecasts, 2018 - 2030 (USD Million)
- Fig. 24 3D Automated Optical Inspection (AOI) System 3D Metrology Market Estimates & Forecasts, 2018 - 2030 (USD Million)
- Fig. 25 Others Market Estimates & Forecasts, 2018 - 2030 (USD Million)
- Fig. 26 3D Metrology Market, By Application : Key Takeaways
- Fig. 27 3D Metrology Market, By Application : Market Share, 2023 & 2030
- Fig. 28 Quality Control and Inspection Market Estimates & Forecasts, 2018 - 2030 (USD

Million)

Fig. 29 Reverse Engineering Market Estimates & Forecasts, 2018 - 2030 (USD Million)

Fig. 30 Virtual Simulation Market Estimates & Forecasts, 2018 - 2030 (USD Million)

Fig. 31 3D Scanning Market Estimates & Forecasts, 2018 - 2030 (USD Million)

Fig. 32 Others Market Estimates & Forecasts, 2018 - 2030 (USD Million)

Fig. 33 3D Metrology Market, By End-use : Key Takeaways

Fig. 34 3D Metrology Market, By End-use : Market Share, 2023 & 2030

Fig. 35 Aerospace & Defense Market Estimates & Forecasts, 2018 - 2030 (USD Million)

Fig. 36 Semiconductor & Electronics Market Estimates & Forecasts, 2018 - 2030 (USD Million)

Fig. 37 Automotive Market Estimates & Forecasts, 2018 - 2030 (USD Million)

Fig. 38 Medical Market Estimates & Forecasts, 2018 - 2030 (USD Million)

Fig. 39 Construction & Engineering Market Estimates & Forecasts, 2018 - 2030 (USD Million)

Fig. 40 Heavy Machinery Market Estimates & Forecasts, 2018 - 2030 (USD Million)

Fig. 41 Others Market Estimates & Forecasts, 2018 - 2030 (USD Million)

Fig. 42 3D Metrology Market Revenue By Region, 2023 & 2030 (USD Million)

Fig. 43 Regional Marketplace: Key Takeaways

Fig. 44 Regional Marketplace: Key Takeaways

Fig. 45 North America 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 46 U.S. 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 47 Canada 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 48 Europe 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 49 Germany 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 50 UK 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 51 France 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 52 Italy 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 53 Spain 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 54 RoE 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 55 Asia Pacific 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 56 China 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 57 India 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 58 Japan 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 59 South Korea 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 60 RoAPAC 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 61 Latin America 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD

Million)

Fig. 62 Brazil 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 63 Mexico 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 64 RoLATAM 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 65 MEA 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 66 Saudi Arabia 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 67 South Africa 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 68 RoMEA 3D Metrology Market Estimates & Forecast, 2018 - 2030 (USD Million)

Fig. 69 Key Company Categorization

Fig. 70 Company Market Share Analysis, 2023

Fig. 71 Strategic Framework

## I would like to order

Product name: 3D Metrology Market Size, Share & Trends Analysis Report By Component (Hardware, Software, Services), By Hardware (CMM, VMM), By Application (Quality Control & Inspection, 3D Scanning), By End-use, By Region, And Segment Forecasts, 2024 - 2030

Product link: <https://marketpublishers.com/r/3F05F9F132FEEN.html>

Price: US\$ 4,950.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

[info@marketpublishers.com](mailto:info@marketpublishers.com)

## Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/3F05F9F132FEEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:  
Last name:  
Email:  
Company:  
Address:  
City:  
Zip code:  
Country:  
Tel:  
Fax:  
Your message:

**\*\*All fields are required**

Customer signature \_\_\_\_\_

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below

and fax the completed form to +44 20 7900 3970