

3D Optical Metrology Market, By Type (3D Automated Optical Inspection System, Optical Digitizer and Scanner, Laser Scanning, and Coordinate Measuring Machine); By Component (Software and Hardware) By Application (Quality Control, Reverse Engineering, Rapid Prototyping, Virtual Assembly, and Others); By Vertical (Aerospace & Defense, Automotive, Architecture & Construction, Medical, Electronics, Energy & Power, Heavy Machinery, and Others): Global Industry Analysis, Size, Share, Growth, Trends, and Forecast 2016 - 2024

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Abstracts

REPORT BRIEF

The report covers the forecast and analysis for the 3D optical metrology market on a global and regional level.

The report includes the drivers and the restraints that affect the growth of the market.

Detailed information about the market opportunities is discussed.

The revenue generated by the prominent industry players has been analyzed in the report.

The market numbers have been calculated using top-down and the bottom-up approaches.

The 3D optical metrology market has been analyzed using the Porters Five Forces Analysis.

The market is segmented on the basis of type, component, application, and vertical which in turn is bifurcated on the regional level as well.

All the segments have been evaluated based on the present and the future trends.

The report deals with the in-depth quantitative and qualitative analyses of the 3D optical metrology market.

The report includes the detailed company profiles of the prominent market players.

MARKET SUMMARY

For obtaining the 3D optical measurements using structured light is one of the most commonly used techniques. 3D optical measurement helps in capturing shape of an object for constructing a 3D model which in turn is used for the measurements and analysis. The 3D optical measuring devices are used for comprehensive and accurate characterization of the products.

VALUE

The global 3D optical metrology market was valued at around USD 11,200.0 million in 2016 and is expected to reach over USD 19,500.0 million by the end of 2024, growing at a CAGR of over 7% between 2017 and 2024.

DRIVERS AND RESTRAINTS

Industries are now majorly focusing on improving their products by increasing the reliability and the quality factors which can be done with the help of different 3D optical measuring devices. With the help of accurate 3D scanning and inspection analysis, the manufacturers are improving their quality control thus triggering the growth of the

market. The inability of the conventional measuring devices to address several manufacturing issues also attributes to the growth of the market.

High maintenance cost of the tools, capital requirement, and the lack of expertise in handling the 3D metrology systems are expected to be major restraining factors for industry participants throughout the forecast period.

SEGMENTATION

There is an increased demand for the optical digitizers and scanners owing to its utilization for the precise optical measurements. In various sectors such as automotive and aerospace, micro and nanostructures are studied in detail. For these precise measurements, the optical digitizers and scanners are used widely thus increasing its demand in the global market. The optical digitizers and scanners are being used increasingly in the consumer electronics sector owing to the requirement of accurate measurements.

The hardware segment contributed a major market share of over USD 11,000.0 million in 2017. But the software segment is expected to register the highest CAGR in the coming years. The 3D metrology software has the ability to solve complex engineering tasks rapidly and accurately this increasing its demand in the 3D optical metrology market.

In any of the manufacturing process, quality control plays a vital role in ensuring the smooth functioning of the production without incurring any extra cost. Thus, quality control contributed a major share in the 3D optical metrology market. Reverse engineering is expected to witness the highest CAGR growth owing to the fact that qualitative products can be produced using reverse engineering.

The automotive segment contributed the highest market share of about USD 2,900.0 million in 2016. The architecture and the construction sector is expected to register the highest CAGR growth in the coming years. The integration of the 3D scanning technology with software such as computer-aided design (CAD) in the architecture construction industry has propelled the growth of the market.

North America is expected to dominate the 3D optical metrology market. The increased adoption of the advanced and latest 3D scanning technologies for improving the product quality across all the sectors is driving the growth of the market in this region. Rapid digitalization across all industries and technological advancements in the countries of

North America has fuelled the growth of the 3D optical metrology market.

INDUSTRY PLAYERS

The global 3D optical metrology market report profiles some of the leading players in the market and analyzes their key strategies. The major players in the market are Capture 3D, Carl Zeiss, Faro Technologies, GOM, Hexagon Metrology, Leica Microsystems, Nikon Metrology, Perceptron, Sensofar USA, Steinbichler Optotechnik, Zeta Instruments, and Zygo.

The prominent market players maintain the competitive edge in the global market by making investments in the mergers and acquisitions and by increasing their product portfolio. For instance, in July 2017, Hexagon Manufacturing Intelligence launched the QUINDOS 7.12, the new version of the leading metrology software for special geometries.

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