

Contact Probe Market, Size, Share, Growth, Opportunity and Forecast, 2021-2028 | DataM Intelligence

Contact Probe Market is expected to grow at a CAGR of 3.6% during the forecasting period (2021-2028).



North Carolina, Charlotte, Aug 23, 2021 ([Issuewire.com](https://www.issuewire.com)) - Market Overview

A contact probe is a testing instrument that can be fit into the assembly line of the electronic devices manufacturing industries for testing of semiconductors, electronics, and electrical devices. The equipment helps to reduce the labor cost, time, and manual efforts involved in the semiconductor manufacturing process by ensuring the high quality of the devices.

The size of such test equipment varies from small computer-driven dedicated fixed-purpose testers to large programmable machines. The cost of the equipment also varies according to size. Contact probe is test equipment devices perform wafer testing or wafer sorting for the semiconductor device.

The contact probes provide accurate testing of the irregular shapes roughness testing of the surface of the equipment. Hence, contact probes are preferred in various applications, including manufacturing industries, automotive, electronics, semiconductors, and many more.

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Market Dynamics

The growing application of contact probes in various electronic instruments triggers the global market for contact probes in various developing regions. The growing adoption of various consumer electronic products and futuristic technology is creating immense opportunities for the contact probe market to proliferate in the forecast period

The growing application of contact probes in various electronic instruments is triggering the global market for contact probes in various developing regions

Spring contact probes or contact probes are used for consistent low-wear contacting and testing of electric and electronic devices. General applications are PCB test, wire harness, and connector test, the use as charging and battery contacts or connectors of cordless electronic devices. Furthermore, to cater to the various applications, contact probes are available in various tip styles, dimensions, and spring forces, some even with added integrated functions, which is helping the market capture the electronic market in terms of testing and as a connector.

For instance, contact probes are used for wire harness and connector test which are used in different functions includes measurements of active resistance of conductors, studies related to influence of environmental factors, a test of mechanical parameters and test of resistance of chemical agents, etc., to perform the above-mentioned functions requires various types of probes such as threaded probes, step probes, push back probes.

An example of contact probes in a wire harness is light contact probes used as testing instruments for terminal insertion of wire harness connectors making module construction easier. Originally contact probes are innovated for PCB testing, and at present, they have become standardized. They are material commodities and need to be restored and changed regularly. The steady demand for PCBs provides steady market revenue to the contact probes due to the constant demand for testing products globally. For instance, according to IPC (Association Connecting Electronics Industries), total North American PCB shipments in December 2019 were increased by 8.7 percent compared to the last year.

Growing adoption of various consumer electronic products and futuristic technology

Contact probes are used in many industries for their testing and effective connection abilities, which is boosting the demand for contact probes in the household consumer electronics sector; security electronic products sector; portable personal devices such as laptops, smartphones; transportation; medical; industrial and industrial retail. For instance, according to The Semiconductor Industry Association (SIA), the global semiconductor industry sales were US\$ 412.1 billion in 2019.

The huge industrial establishment of semiconductors and the growing adoption of modern portable devices are constantly driving the market growth of contact probes. Furthermore, in most mobile phones, a contact probe is used as a connector to charge the battery or other functions such as data transmission. Due to IoT technology, most devices come with connectivity options, which are the major end-user market of contact probes at present.

For instance, even at the Covid-19 pandemic, worldwide smartphone vendors shipped about 374 thousand units in the fourth quarter of 2020, leading to annual growth of 1.1% compared to the 369.9 thousand units shipped in the fourth quarter of 2019. The high demand for smartphones is expected to

strengthen the contact probe market in the future. Contact probes are also applied in new modern medical devices such as CPI dockings, skin lasers, inhalation machines, and pregnancy monitors, etc.

Design and construction limitations are hampering the market's growth

According to the demand of consumers and technological needs, lack of innovation and design limitation hinders the market growth of the global contact probe market. For instance, mobile devices started using the USB 3.1 Type C and USB SS, but the pogo pin design is increasingly challenged and outdated.

Although they may be continued to operate at higher speeds, these contacts are not designed to operate at higher speeds. Many manufacturers are interested in other innovative connectors instead of contact probes for designs that require physical flexibility in high-speed applications. Since there is no wiping action, as with a standard pin and socket contact, this design is more subject to contamination and corrosion.

The corrosion, in turn, increases the contact resistance through the connection, making it more difficult for low voltage, high-speed signals to be transmitted. This design is subject to contamination and corrosion since there is no wiping action with a normal pin and socket contact. With corrosion, it results in more contact resistance through the connections, making it difficult to use for low voltage, high-speed signals to be transmitted.

In addition, a second design issue is an internal spring. The spring has to make good contact with the pogo pin's plunger and base, which can be tricky. The spring also creates inductance into the contact due to its spiral design. The quality of the raw materials and the design of the pogo pin are important to its performance. Poor quality metal, inferior structural integrity, and cheap construction of equipment can cause high levels of contact resistance, which may hamper the market.

Segment Analysis

By Product

- 3D Touch Probes
- 2D Spindle Probes
- Tool-Length Measuring Probes
- Tool Touch-off Probes
- Battery Contacts
- Short Travel Probes
- Fine Pitch Probes
- Double Plunger Probes
- Interface Probes
- Coaxial Probes
- Radio Frequency Probes
- High Current Probes
- Threaded Probes
- Wire Harness Probes
- Step Probes
- Switch Probes
- Twist Proof Probes
- Push Back Probes

- Others

By Transmission

- Infrared
- Radio
- Hard-Wired

By Component

- Hardware
- Software

By Technology

- Automated
- Semi-Automated
- Manual

By Machine

- CNC machining center
- CNC Turning Center
- ICT / FCT Probes
- Others

By End-User

- Automotive
- Aerospace and Defense
- Electronics
- General Machining
- Healthcare
- Chemicals and Petrochemical
- Oil and Gas
- IT and Telecom
- Others

Geographical Analysis

Rapidly growing manufacturing facilities with growing population demand for consumer's electronics, automotive, etc. with the contact probe-based products is boosting the market of Asia-Pacific region in the recent period

By region, the global contact probe market is segmented into North America, South America, Europe, Asia-Pacific, Middle-East, and Africa. Among all of the regions, Asia-Pacific is the dominant region for the global contact probe market and is expected to grow at the highest CAGR during the forecasted period due to growing the manufacturing facilities with growing population demand for consumers electronics, automotive, etc. with the contact probe-based products followed by North America region.

Further Asia-Pacific region has increased the demand for commercial and public infrastructure due to urbanization and population growth. According to the United Nations Industrial Development Organization (UNIDO) report, the Asia/Pacific region has the highest presence of leading manufacturers, and the insulation market has accounted for over 40% of global revenue in this market.

High industrialization rates and increased construction spending in emerging economies like China, India, Indonesia, Thailand, Malaysia, and the Philippines have driven the need for a better contact probe market. North America is also growing fast for the insulation foam market due to the growing demand for thermal insulation in commercial and residential buildings, followed by the European region.

Further, the market is driven by rising consumption awareness regarding energy conservation and regulatory policies to reduce greenhouse gas emissions with the help of better foam insulating materials in the building & construction sector. North America's growth for the Contact Probe market is also influenced by government initiatives such as the Weatherization Assistance Program, which promotes thermal insulation, especially in low-income households.

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Competitive Landscape

The contact probe market is highly fragmented with the presence of local as well as global companies. Some of the key players contributing to the market's growth include FEINMETALL GmbH, Marposs S.p.A., Renishaw plc., Hexagon AB, DR. Johannes Heidenhain GmbH, Blum-Novotest GmbH, Tormach, Inc., METROL Co., Ltd., Centroid Corporation, Quality Vision International, Mahr GmbH, Zeiss are the leading market players with significant market share and among others.

The major players are adopting several growth strategies such as product launches, acquisitions, and collaborations, contributing to the contact probe market's growth globally. However, key players focusing on contact probe products target product launch as their growth strategy to build their market share.

For instance, on 2nd Sep 2020, Hexagon's Manufacturing Intelligence division launched a ground-breaking ultrasonic probe for automated wall thickness measurement on machine tools designed for wet machining

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Media Contact

DataM Intelligence

info@datamintelligence.com

+18774414866

India

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