Probe Card Cleaning Market Revenue to Hit USD 2,051.5 million by 2030 – Astute Analytica

CHICAGO, UNITED STATES, January 30, 2023 /EINPresswire.com/ -- Global probe card cleaning market was valued at US$ 1,255.4 million in 2021 and is forecast to reach a valuation of US$ 2,051.5 million by 2030, growing at a CAGR of 5.8% over the forecast period 2022-2030.

Request Sample Report at: https://www.astuteanalytica.com/request-sample/probe-card-cleaning-market

Probe card cleaning enhances equipment usage and boosts wafer yield and overall throughput by removing optical recognition mistakes. This makes offline cleaning necessary, which preserves their shape and lengthens the life of the probe card. Furthermore, the needles need to be cleaned after a specific amount of use in order to preserve optimal efficiency.

In order to remove loose, embedded dirt from probe tips, a variety of specialty cleaning products, including assembly clean, probe clean, probe refresh, and probe scrub, among others, are available. Since probe tips are used in test factories, regular cleaning is crucial since contamination or the presence of dirt might cause issues in the field.

The new developments in probe card cleaning include an "adaptive interval" process that allows optimization of the cleaning cycle. In this case, artificial intelligence (AI) algorithms are employed to gauge how filthy a needle is. Only in situations where yield is being compromised does this assist in cleaning them. Additionally, the market is likely to expand at a faster rate throughout the forecast period due to a number of factors, such as the rising use of probe cards in electronic equipment and semiconductor manufacturing.

Market Dynamics

Driving Factor

Rising Application of Probe Cards in Semiconductor Manufacturing

The market for probe card cleaning is expanding quickly due to factors like the expanding use of semiconductors in a variety of manufacturing processes and electronic devices. Due to the widespread use of integrated circuits in contemporary electronic devices, probe cards are currently in very high demand.

Probe cards are a popular new tool for controlling and monitoring semiconductor manufacturing operations. The cards assist in spotting flaws early in the production process, which can save them from developing into bigger difficulties later on.

The versatility of probe cards in terms of manufacturing processes is one of their advantages. Due to this, they are a flexible tool for supporting quality control over the manufacturing procedure. Additionally, probe cards can be used to find flaws or anomalies before they grow large enough to cause issues.

Manufacturers can decrease their time to market and raise the caliber of their goods by utilizing probe cards. Additionally, they can lower future expenses related to quality problems.

Market Opportunity

Accessibility of Advance Technologies

The market for businesses engaged in probing card cleaning is expanding as a result of the increasing use of automatic socket cleaning. Sockets can be cleaned in a variety of ways, including by brushing, blowing out pressurized air, using a laser, and using a cleaning substrate.

The consumer may apply cleaning agents, which are frequently an abrasive film, to wash the probes of a probe card during wafer sorting. A less sophisticated cantilever or vertical probe cards will have their probe material removed by this type of abrasive cleaning.

Restraint Factor

Preserving a Fine Balance of Probing to Cleaning Ratio

The insufficient balance of the probing-to-cleaning ratio may hinder the global probe card cleaning market. Probing a probe card with an abrasive removes a little substance from the probe tip. As a result, while developing a cleaning strategy for probe cards, the lifespan of the probe card and the test yield are compromised. For instance, if the probing-to-cleaning ratio is set too high, the yield will be greatly reduced. In contrast, if the probing-to-cleaning ratio is set too low, probe card longevity and test equipment utilization would suffer significantly.

Thus, the user should attempt to maintain a probing-to-cleaning ratio that is both low enough to reduce probe tip wear and high enough to maximize yield when selecting a cleaning approach.

Market Trend

An Adaptive AI method Enhances the Process of Cleaning Probe Cards

The probe cards that touch the wafers over time build up contamination that needs to be cleaned. Consequently, the adaptive interval technique is employed for card cleaning solutions to optimize the cleaning cycle. Applying artificial intelligence algorithms, it assesses the needles' cleanliness, only cleaning them when yields suffer.

Segmentation Overview

Type Analysis

As per our research, in 2021, the scrub and polish segment maintained the maximum share of the probe card cleaning industry, accounting for approx 31% share.

Contrary, the laser cleaner segment is likely to exceed a CAGR of 7.6% over the analysis years. Without causing any substrate damage, laser cleaning assists in the selective removal of surface contaminants. This technique facilitates the quick cleaning of probe cards. With the continued growth of technology, we anticipate that the use of laser technologies will grow.

Since fiber film sheets may be used for chemical mechanical polishing and optical connector polishing at room temperature, they are also becoming popular in the worldwide probe card cleaning market. These sheets are abrasive pads embedded in a polymeric foam layer consisting of fibers with lengths ranging from 3 to 5 mm.

Application Analysis

In 2021, the semiconductor wafer inspection segment dominated the market holding a share of 76.3%, and is increasing at an annual growth rate of 6.0% from 2022 to 2030. In addition, in the same year, the semiconductor wafer inspection segment recorded a revenue of US$ 957.3 Mn.

Regional Analysis

The Asia Pacific region is expanding at an annual growth rate of 6.5% in the global probe card cleaning industry, followed by North America accounting for 5.9%. Asia is likely to experience excellent growth during the projection period owing to the region's rapidly growing chip and semiconductor industry.

For the most part, China imports the probe cards it needs to meet its demand. However, more

and more Chinese firms are switching to domestic production of probe cards due to political reforms. Thus, this change will lead to the growth of the market.

We anticipate that the region will continue to hold the lion's share thanks to significant expenditures in R&D aimed at creating cleaner, more affordable cleaning procedures and growing the size of important United States industries.

Browse Detailed Summary of Research Report: https://www.astuteanalytica.com/industry-report/probe-card-cleaning-market

Companies Landscape
Some of the notable competitors in the global probe card cleaning market are:
Wentworth Laboratories
Advantest
SPS Group BV
FEINMETALL GmbH
Onto Innovation
HTT Group
Nagase Abrasive Materials Co., Ltd.
IMT Co. Ltd.
Mipox
International Test Solutions
MGN International
JEM America Corp
Other Prominent Players

Segmentation Outline
The global probe card cleaning market segmentation focuses on Type, Application, and Region.
By Type
Cleaning Scrub and Polish
Cleaning Sheet
Fiber Film
Laser Cleaner
Others

By Application
Semiconductor Wafer Inspection
Compound Semiconductor Wafer Inspection

By Region
North America
The U.S.
Canada

Mexico

Europe
Western Europe
The UK
Germany
France
Italy
Spain
Rest of Western Europe
Eastern Europe
Poland
Russia
Rest of Eastern Europe

Asia Pacific
China
India
Japan
Australia & New Zealand
ASEAN
South Korea
Rest of Asia Pacific

Middle East & Africa (MEA)
Saudi Arabia
South Africa
UAE
Rest of MEA

South America
Argentina
Brazil
Rest of South America

Looking For Customization: https://www.astuteanalytica.com/ask-for-customization/probe-card-cleaning-market

About Astute Analytica
Astute Analytica is a global analytics and advisory company that has built a solid reputation in a short period, thanks to the tangible outcomes we have delivered to our clients. We pride ourselves in generating unparalleled, in-depth, and uncannily accurate estimates and projections for our very demanding clients spread across different verticals. We have a long list of satisfied

and repeat clients from a wide spectrum including technology, healthcare, chemicals, semiconductors, FMCG, and many more. These happy customers come to us from all across the Globe. They are able to make well-calibrated decisions and leverage highly lucrative opportunities while surmounting the fierce challenges all because we analyze for them the complex business environment, segment-wise existing and emerging possibilities, technology formations, growth estimates, and even the strategic choices available. In short, a complete package. All this is possible because we have a highly qualified, competent, and experienced team of professionals comprising business analysts, economists, consultants, and technology experts. In our list of priorities, you-our patron-come at the top. You can be sure of best cost-effective, value-added package from us, should you decide to engage with us.

Aamir Beg
Astute Analytica
+1 888-429-6757
email us here
Visit us on social media:
Twitter
LinkedIn
