

# Source Measure Unit Market is anticipated to surpass US\$1,158.600 million by 2029 at a CAGR of 10.16%

*The source measure unit market is anticipated to grow at a CAGR of 10.16% from US\$588.684 million in 2022 to US\$1,158.600 million by 2029.*



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/EINPresswire.com/ -- According to a new study

published by Knowledge Sourcing Intelligence, the [source measure unit market](#) is projected to grow at a CAGR of 10.16% between 2022 and 2029 to reach US\$1,158.600 million by 2029.

The source measure unit market is propelled by heightened adoption in the automotive sector, a growing governmental emphasis on manufacturing electric and hybrid [vehicles](#), and an increased demand for precision measurement units for device testing.

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Intelligence*

Source measure unit (SMU) devices are instruments designed to provide voltage and measure current concurrently. The rising demand for SMUs is driven by their capability to conduct quicker tests with enhanced precision compared to conventional methods. Additionally, the utilization of SMUs helps eliminate the necessity for intricate synchronization and connection through multiple

instruments, ultimately reducing long-term ownership costs and consequently fuelling market expansion. In July 2023, Keysight Technologies, Inc. launched the PZ2100 Series High-Channel Density Precision Source Measure Unit (SMU) Solution to accelerate the characterization of integrated circuit (IC) designs. This latest SMU solution offers digital development engineers 20 precise SMU channels within a compact 1U rack space.

Access sample report or view details: <https://www.knowledge-sourcing.com/report/source-measure-unit-market>

The market for source measure units (SMUs) can be categorized by product types, including general-purpose SMUs, application-specific SMUs, and precision SMUs. General-purpose SMUs

are versatile instruments designed to meet a broad range of testing requirements across various industries and applications. In contrast, application-specific SMUs are tailored to meet the specific needs of particular applications or industries, offering optimized performance and features. Precision SMUs, on the other hand, are engineered to deliver highly accurate and reliable measurements, making them ideal for tasks that demand precise voltage and current control. Each type of SMU caters to different testing scenarios and user requirements, contributing to the overall versatility and effectiveness of SMUs in a wide array of applications across industries such as electronics manufacturing, semiconductor testing, research laboratories, and more.

The source measure unit (SMU) market can be segmented based on the current ranges they support, which include microamps to 1 milliamper (μA – 1 mA), milliamps to 1 ampere (mA – 1 A), and currents above 1 ampere (Above 1 A). SMUs designed for μA – 1 mA range cater to applications requiring precise measurements and control of very low currents, such as semiconductor testing and sensor calibration. Those falling in the mA – 1 A range are suitable for a broader range of applications, including battery testing, [LED](#) characterization, and electronic component testing. SMUs with current ranges above 1 ampere are utilized in high-power applications such as power device testing and automotive electronics. By offering SMUs tailored to different current ranges, manufacturers can address the varied needs of industries and applications, ensuring accurate and reliable measurements across a wide spectrum of current requirements.

The source measure unit (SMU) market is categorized based on the form factors of the units, which include benchtop and modular configurations. Benchtop SMUs are standalone instruments designed for use on a laboratory bench or work surface, offering convenient operation and control for individual testing setups. These units are often equipped with integrated displays and user interfaces, making them suitable for standalone testing applications. On the other hand, modular SMUs are designed to be integrated into larger test systems or rack-mounted setups, offering flexibility and scalability for multi-channel testing needs. Modular SMUs can be easily combined with other instrumentation modules to create customized test solutions tailored to specific applications and requirements. By providing both benchtop and modular form factors, manufacturers cater to the diverse preferences and requirements of users across various industries, ensuring optimal flexibility and usability in different testing environments.

The source measure unit (SMU) market is segmented based on the industry verticals it serves, which include automotive, IT & telecommunication, aerospace & defence, healthcare, and others. In the automotive sector, SMUs find extensive use in testing and characterizing electronic components and systems for vehicles, ensuring reliability and performance. Within the IT & telecommunication industry, SMUs play a crucial role in the development and testing of electronic devices, network equipment, and telecommunications infrastructure. In aerospace & defence, SMUs are utilized for testing avionics systems, radar equipment, and other electronic components critical for mission-critical applications. Moreover, in the healthcare sector, SMUs

are employed in medical device testing, research laboratories, and diagnostic equipment development, contributing to advancements in medical technology. Additionally, SMUs serve various other industries, including energy, manufacturing, and research, where precise measurement and control of electrical parameters are essential for product development and quality assurance. This segmentation reflects the diverse applications and requirements of SMUs across a wide range of industries, highlighting their significance in advancing technology and innovation across multiple sectors.

The Asia Pacific region is poised to capture a substantial market share due to its well-established automotive and semiconductor industries. Moreover, the increasing defence expenditures in countries like India and China, alongside the rising utilization of source measure units within the healthcare sector, are expected to further stimulate market growth in the region. Meanwhile, significant growth is anticipated in the North American region, driven by the early adoption of technology and substantial investments in research and development by key market players. Additionally, the introduction of 5G technology and the expansion of LTE networks, combined with the expanding IoT market, enhance the demand for precision device testing, thereby contributing to market growth in the region.

Among the leading players in the industry are Keysight Technologies, Fortive's Tektronix, Inc., Rohde & Schwarz, Yokogawa Test & Measurement Corporation, VX Instrument GmbH, Advantest Corporation, Premier Farnell Limited, and Chroma Ate, Inc. These companies are prominent contributors to the market, offering a diverse range of high-quality testing and measurement solutions tailored to various industries and applications.

The market analytics report segments the source measure unit market on the following basis:

- By Product
  - o General Purpose SMUs
  - o Application Specific SMUs
  - o Precision SMUs
- By Current Range
  - o  $\mu$ a – 1 Ma
  - o Ma – 1 A
  - o Above 1 A
- By Form Factor
  - o Benchtop
  - o Modular

- By Industry Vertical

- o Automotive
- o IT & Telecommunication
- o Aerospace & Defense
- o Healthcare
- o Others

- By Geography

- o North America

- United States
- Canada
- Mexico

- o South America

- Brazil
- Argentina
- Others

- o Europe

- Germany
- Spain
- United Kingdom
- France
- Others

- o Middle East and Africa

- Saudi Arabia
- UAE
- Others

- o Asia Pacific

- China
- Japan
- India
- South Korea
- Thailand

- Taiwan
- Indonesia
- Others

#### Companies Profiled:

- Keysight Technologies
- Tektronix, Inc. (Fortive)
- Rohde & Schwarz
- Yokogawa Test & Measurement Corporation
- VX Instrument GmbH
- Advantest Corporation
- Premier Farnell Limited
- Chroma Ate, Inc.

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