High-speed Data Converter Market by Type (Analog-to-digital Converter, and Digital-to-analog Converter), Frequency Band (<125 MSPS, 125 MSPS to 1 GSPS, and >1 GSPS), Application (Communications, Test & Measurement) and Region - Global Forecast to 2028

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Report description:

The high-speed data converter market was valued at USD 3.0 billion in 2022 and is projected to reach USD 4.3 billion by 2028; it is expected to grow at a CAGR of 6.4% from 2023 to 2028. Growing demand for high-resolution images in scientific and medical applications acts as a driver whereas potential use of high-speed data converters in developing advanced 5G infrastructure, and rapid adoption of IoT devices and data consumption provide lucrative opportunities to the high-speed data converter market.
"Analog-to-digital converter in automotive application segment is expected to grow at the highest growth rate during the forecast period"
Analog-to-digital converters in the automotive industry are expected to grow with the highest growth rate during the forecast period due to the increasing demand for advanced automotive features, such as autonomous driving, advanced driver-assistance systems (ADAS), and infotainment systems in modern cars. Modern cars require ADCs with high sampling rates to accurately capture the signals from sensors and other devices. These are equipped with a growing number of sensors, such as cameras, radar, lidar, and ultrasonic sensors generating analog signals that must be converted into digital signals that can be processed by the car's computer systems.
"Test & measurement application segment in Asia Pacific region is expected to hold the largest market share during the forecast period"
The test & measurement application holds the largest market share in the Asia Pacific region and is expected to retain its position during the forecast period. The Asia Pacific region, particularly China, is the global hub for electronics manufacturing. This leads to a high concentration of test & measurement activities across the region, ensuring a consistent demand for high-speed data

converters used in testing and characterizing various electronic devices. Also, countries like China and India are increasingly adopting stricter quality control measures and adhering to international regulations. This necessitates the use of high-performance high-speed data converters in test & measurement equipment to guarantee the compliance and reliability of manufactured electronics.

"China in Asia Pacific is expected to hold the largest market share during the forecast period"

China accounted for the largest share of the high-speed data converter in Asia Pacific in 2022 and is expected to retain its position during the forecast. China is the world's largest electronics manufacturing hub, with a vast ecosystem of high-speed data converter suppliers and distributors. This proximity to manufacturers facilitates cost-effective production and distribution, giving China a significant edge. China's ambitious "Made in China 2025" plan prioritizes technological advancements and domestic high-speed data converter production. This government support fuels research, development, and market expansion.

Following is the breakup of the profiles of the primary participants for the report.

- By Company Type: Tier 1 - 45 %, Tier 2 - 35%, and Tier 3 - 20%
- By Designation: C-Level Executives -32%, Directors- 40%, and Others - 28%
- By Region: North America- 37%, Europe- 15%, Asia Pacific - 40%, and RoW - 8%

The report profiles key high-speed data converter players and analyzes their market shares. Players profiled in this report are Texas Instruments Incorporated (US); Analog Devices, Inc. (US); Infineon Technologies AG (Germany); Microchip Technology Inc. (US); STMicroelectronics (Switzerland); Teledyne Technologies Incorporated (US); ROHM CO., LTD. (Japan), etc.

Research Coverage

The report defines, describes, and forecasts the high-speed data converter based on Type, Frequency Band, Application, and Region. It provides detailed information regarding drivers, restraints, opportunities, and challenges influencing the growth of the high-speed data converter market. It also analyzes competitive developments such as product launches, acquisitions, expansions, contracts, partnerships, and actions conducted by the key players to grow in the market.

Reasons to Buy This Report

The report will help the market leaders/new entrants with information on the closest approximations of the revenue numbers for the overall high-speed data converter and the subsegments. This report will help stakeholders understand the competitive landscape and gain more insights to position their businesses better and plan suitable go-to-market strategies. The report also helps stakeholders understand the market pulse and provides information on key market drivers, restraints, challenges, and opportunities.

The report provides insights on the following pointers:

- Analysis of key drivers (Rising demand for test & measurement (T&M) solutions by end users, growing demand for high-resolution images in scientific and medical applications, and increasing adoption of technologically advanced data acquisition systems), restraints (Integration of RF data converters into FPGA and system-on-chip (SoC), and high development cost), opportunities (Potential use of high-speed data converters in developing advanced 5G infrastructure, and rapid adoption of IoT devices and data consumption), and challenges (Development of low-power consumption high-speed data converters) influencing the growth of the high-speed data converter market.
- Product Development/Innovation: Detailed insights on upcoming technologies, research & development activities, and new product & service launches in the high-speed data converter

- Market Development: Comprehensive information about lucrative markets - the report analyses the high-speed data converter across varied regions.

- Market Diversification: Exhaustive information about new products & services, untapped geographies, recent developments, and investments in the high-speed data converter

- Competitive Assessment: In-depth assessment of market shares, growth strategies, and service offerings of leading players like

Texas Instruments Incorporated (US); Analog Devices, Inc. (US); Infineon Technologies AG (Germany); Microchip Technology Inc. (US); STMicroelectronics (Switzerland); Teledyne Technologies Incorporated (US); ROHM CO., LTD. (Japan); Renesas Electronics Corporation (Japan); Synopsys, Inc. (US); ADSANTEC (US); IQ-ANALOG (US); Omni Design Technologies, Inc. (US); Corebai Microelectronics (Beijing) Co., Ltd. (China); Atom Semiconductor Technologies Limited (China); Data Device Corporation (US); Antelope Audio (US); Agile Analog Ltd. (UK); Rio Systems (Israel); Molex (US); TEWS Technologies GmbH (Germany); Numato Systems Private Limited (India); VadaTech (US); Vervesemi Microelectronics Pvt LTD (India); Alphacore Inc. (US), among others in the high-speed data converter strategies. The report also helps stakeholders understand the pulse of the high-speed data converter and provides them with information on key market drivers, restraints, challenges, and opportunities.

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