The Autonomous Driving SoC Market Size Reach USD 100.1 Billion by 2033 Growing at 10.6% CAGR Globally

WILMINGTON, DE, UNITED STATES, December 5, 2024 /EINPresswire.com/ -- According to the report published by Allied Market Research, The Autonomous Driving SoC Market Size Reach USD 100.1 Billion by 2033 Growing at 10.6% CAGR Globally. The report provides an extensive analysis of changing market dynamics, major segments, value chain, competitive scenario, and regional landscape. This research offers valuable able guidance to leading players, investors, shareholders, and startups in devising strategies for sustainable growth and gaining a competitive edge in the market.

Autonomous Driving SoC Market Size

The global autonomous driving soc market was valued at $36.8 billion in 2023, and is projected to reach $100.1 billion by 2033, growing at a CAGR of 10.6% from 2024 to 2033.

The autonomous driving SoC market growth is driven by advancements in artificial intelligence and machine learning technologies, enhancing the capabilities of self-driving vehicles. The global autonomous driving SoC market is growing due to several factors such as advancements in AI and deep learning technologies, regulatory push for autonomous vehicles, and growing investments and partnerships. However, the technological challenges and complexity, and high cost restrains the development of the market. In addition, vertical integration and value-added services, and technological innovation and differentiation will provide ample opportunities for the market's development during the forecast period. The autonomous driving SoC market size is expected to grow significantly in the coming years due to advancements in AI and automotive technologies.

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An autonomous driving System-on-Chip (SoC) refers to a specialized integrated circuit designed to power and control various functions within autonomous vehicles. This SoC serves as the brain

of the vehicle, handling complex computations, data processing, sensor fusion, decision-making, and control tasks necessary for autonomous driving. Integration with various sensors such as cameras, LiDAR, radar, and ultrasonic sensors to gather real-time data about the vehicle's surroundings and environment. High-performance central processing units (CPUs) , graphics processing units (GPUs) , and digital signal processors (DSPs) for processing massive amounts of sensor data, executing algorithms, and running artificial intelligence (AI) and machine learning (ML) models.

The autonomous driving SoC market is segmented vehicle type, level of autonomy, application, and region. On the basis of vehicle type, the market is divided into passenger vehicles, and commercial vehicles. As per level of autonomy, the market is segregated into level 2, Level 3, Level 4, Level 5. On the basis of application, the market is bifurcated into Adaptive Cruise Control (ACC) , Lane Keeping Assistance System (LKAS) , Traffic Jam Assist (TJA) , Automated Parking System (APS) , and others. Region wise, the market is analyzed across North America, Europe, Asia-Pacific, and LAMEA.

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North America, particularly the U.S., and Canada are advancing in the development and adoption of autonomous driving technologies, with major players like NVIDIA, Intel, and Qualcomm investing heavily in this sector. The presence of a robust automotive industry, supportive regulatory environment, and strong technological infrastructure contribute to the growth of the automotive SoC market in this region.

The major players operating in the autonomous driving SoC market include NVIDIA Corporation, Intel Corporation, Qualcomm Technologies, Inc., Texas Instruments Incorporated, Ambarella, Inc., MediaTek Inc., Renesas Electronics Corporation, Xilinx, Inc., NXP Semiconductors N.V., Infineon Technologies AG. The autonomous driving SoC industry is rapidly evolving, with major tech companies and automotive manufacturers investing heavily in the development of high-performance chips to power self-driving vehicles.

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Industry Trends:

□ In December 2023, Ambarella, Inc., a semiconductor company specializing in edge AI (Artificial Intelligence) introduced its autonomous driving (AD) software stack. This software stack is a collection of modular components designed to enable autonomous driving capabilities in vehicles. The stack is primarily powered by deep learning AI processing, which allows it to perform tasks such as environmental perception, sensor fusion, and vehicle path planning.

□ On January 9th, Black Sesame Technologies, a prominent provider of intelligent vehicle System-

on-Chip (SoC) solutions, unveiled several groundbreaking products and solutions during the CES 2024 event. Among the highlights were the introduction of their high-performance, automotive-grade autonomous driving chip, named the Huashan Series A1000, and their intelligent vehicle cross-domain computing platform, known as the Wudang C1200 Series.

 In September 2020, Li Auto Inc., one of the prominent player in China's new energy vehicle market announced a strategic partnership with NVIDIA Corporation, a global leader in artificial intelligence computing, and its Chinese partner, Huizhou Desay SV Automotive. This collaboration aims to integrate NVIDIA's next-generation autonomous driving smart chip, Orin SoC (System-on-a-Chip) , into Li Auto's full-size extended-range electric vehicles scheduled for launch in 2022.

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Lastly this report provides market intelligence most comprehensively. The report structure has been kept such that it offers maximum business value. It provides critical insights into the market dynamics and will enable strategic decision-making for the existing market players as well as those willing to enter the market.

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with skilled analysts and experts and have a wide experience of working with many Fortune 500 companies and small & medium enterprises.

Pawan Kumar, the CEO of Allied Market Research, is leading the organization toward providing high-quality data and insights. We are in professional corporate relations with various companies. This helps us dig out market data that helps us generate accurate research data tables and confirm utmost accuracy in our market forecasting. Every data company in the domain is concerned. Our secondary data procurement methodology includes deep presented in the reports published by us is extracted through primary interviews with top officials from leading online and offline research and discussion with knowledgeable professionals and analysts in the industry.

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