

Edge Computing In Automotive - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

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Report description:

The Edge Computing in Automotive Market is valued at 1.43 billion in the current year and is expected to register a CAGR of 44.47% during the forecast period to become 9.01 billion by the next five years. The evolution of autonomous vehicles and connected car infrastructure and the requirement for lightweight frameworks and systems to heighten the efficiency of edge computing solutions are anticipated to generate abundant opportunities for edge computing vendors.

Key Highlights

- Enterprises across automotive are beginning to drive new levels of performance and productivity by deploying different technological innovations, like sensors and other data-producing and collecting devices, along with analysis tools. Traditionally, data management and analysis are performed in the cloud or data centers. However, the scenario seems to be changing with the increasing penetration of network-related technologies and initiatives, such as smart manufacturing and smart cities.
- For connected cars to give the value they are expected to, there is a device that can concoct this data in real time. Edge computing is the method of processing data from IoT (Internet of Things) devices where it is generated. With the edge, the data being gathered gets examined right at the source.
- Moreover, processing increasing amounts of data at a faster pace, generated by industrial robots and connected cars equipped with various sensors, is problematic, and 5G applications are solving such issues with their low latency and high reliability, making it easier to offload part of this processing need to edge or cloud-based servers, thus, minimizing the complexity.
- Additionally, the absence of a "global" border and an ecosystem with a single owner that is governed by numerous individuals who must cooperate through networks makes it even more vulnerable. A piece of the infrastructure may be under the control of highly localized attacks with localized impact.
- The COVID-19 pandemic positively affected the 5G and multi-access edge computing (MEC) deployments as businesses strategized service speed and low latency as key differentiators. Tight integration of network and compute to support

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next-generation apps is the way forward.

Edge Computing In Automotive Market Trends

Rising Adoption of IOT to Witness the Growth Edge Computing in Automotive Market

- IoT technologies are overcoming the labor shortage in the manufacturing sector. For more organizations, using Industry 4.0 technologies, like robotization, is part of day-to-day operations.
- Robots collecting and transferring data using IoT devices on an edge network can detect anomalies and eliminate inefficiencies far faster than they could use a cloud-based design. Such a system is substantially more resilient due to its distributed design, which also ensures higher levels of uptime productivity.
- The growing use of IoT in the automotive industry is accelerated by 5G operations, principally fueled by lower latency and network slicing capabilities. A sizable portion of industrial IoT service providers and aggregators currently offer 5 G-enabled network options, which are anticipated to incorporate edge computing over the next few years to handle the massive volume of data.
- Due to the potential of edge computing, industrial manufacturing is transforming. In the upcoming decades, edge computing applications will radically alter manufacturing to increase efficiency and production while lowering costs. This would be accomplished by combining them with a new generation of intelligent IoT edge devices. Over the projected period, this is expected to have a favorable effect on the market's growth.
- Furthermore, the adoption of the cloud in enterprises is primarily due to flexibility, scalability, and cost-effectiveness, which can help the advancement of vehicle capabilities in the studied market.

North America Occupies the Largest Market Share

- North America has accounted for the largest market share and is projected to maintain dominance throughout the forecast years as the consumer and business sectors in the region rely on IoT devices. Higher cloud adoption in the region contributes to the continued transition toward technology. The development of innovative concepts, such as autonomous cars, within the area is also expected to propel regional market growth in the years to come.
- Additionally, the region is anticipated to represent the largest market during the forecast period due to a significant number of edge computing suppliers and the growing acceptance of technology among North American businesses for utilizing new technologies, such as 5G.
- In March 2022, Federal vehicle safety regulators gave the go-ahead for developing and using driverless cars without manual controls like steering wheels or pedals.
- 5G technology is still in the testing stage. However, it is hoped that it will be fruitful in the future. For example, AT&T and Verizon conduct field tests in the United States. Some are backed by corporate partners, such as Crown Castle, the largest US mobile phone website operator and an investor in his Vapor IO, an edge computing specialist.

Edge Computing In Automotive Industry Overview

Edge computing in the automotive market is moderately competitive and consists of several major players. Few major companies today hold a disproportionate amount of the market share, which continues to be significant in all developed nations, particularly in North America and Europe. The market is highly disorganized in developing nations like Japan and China, where regional or

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local sellers predominate. International players are gradually creating supply networks and entering these unstructured marketplaces through mergers and acquisitions as they become aware of the significant potential opportunities.

In January 2023, Belden introduced its Single Pair Ethernet (SPE) portfolio of connectivity products designed to optimize Ethernet connection possibilities in harsh environments, including industrial and transportation operations. The SPE portfolio includes IP20-rated PCB jack, patch cords, and cord sets for clean-area connections and IP65/IP67-rated circular M8/M12 patch cords, cord sets, and receptacles for reliable field device industrial ethernet connections.

In November 2022 - Belden Inc. announced the launch of solutions for network security, ruggedization, and simplified deployment, including the Hirschmann GDME Heavy-Duty Valve Connectors and the Belden Horizon™ edge orchestration platform. The platform manages software that allows secure access to remote equipment while sustaining secure and easy deployment, connection, and management of OT devices and applications.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

Table of Contents:

1 INTRODUCTION

1.1 Study Assumptions and Market Definition

1.2 Scope of the Study

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET INSIGHTS

4.1 Market Overview

4.2 Value Chain / Supply Chain Analysis

4.3 Industry Attractiveness - Porter's Five Forces Analysis

4.3.1 Bargaining Power of Buyers/Consumers

4.3.2 Bargaining Power of Suppliers

4.3.3 Threat of New Entrants

4.3.4 Threat of Substitute Products

4.3.5 Intensity of Competitive Rivalry

5 MARKET DYNAMICS

5.1 Market Drivers

5.1.1 Rising Adoption of IOT

5.1.2 Exponentially Growing Data Volumes And Network Traffic

5.2 Market Restraints

5.2.1 Initial Capital Expenditure For Infrastructure

5.2.2 Privacy and Security Concerns

6 MARKET SEGMENTATION

6.1 By Application

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- 6.1.1 Connected Cars
- 6.1.2 Traffic Management
- 6.1.3 Smart Cities
- 6.1.4 Transportation & Logistics
- 6.1.5 Other Applications
- 6.2 By Geography
 - 6.2.1 North America
 - 6.2.2 Europe
 - 6.2.3 Asia-Pacific
 - 6.2.4 Rest of the World

7 COMPETITIVE LANDSCAPE

- 7.1 Company Profiles
 - 7.1.1 Altran Inc
 - 7.1.2 Belden Inc.
 - 7.1.3 Digi International Inc.
 - 7.1.4 Cisco Systems, Inc.
 - 7.1.5 Amazon Web Services (AWS), Inc.
 - 7.1.6 General Electric Company
 - 7.1.7 Hewlett Packard Enterprise Development LP
 - 7.1.8 Huawei Technologies Co., Ltd.
 - 7.1.9 Litmus Automation
 - 7.1.10 Azion Technologies Ltd.

8 INVESTMENT ANALYSIS

9 MARKET OPPORTUNITIES AND FUTURE TRENDS

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