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Edge Computing & Network Slicing Market Forecasts to 2032 – Global Analysis By Component (Hardware, Software and Services), Network Architecture, Deployment Model, Application, End User and By Geography

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Abstracts

According to Stratistics MRC, the Global Edge Computing & Network Slicing Market is accounted for $227.80 billion in 2025 and is expected to reach $543.94 billion by 2032 growing at a CAGR of 13.24% during the forecast period. Edge computing combined with network slicing is reshaping digital networks by enabling faster data processing and specialized connectivity. By processing data near its source, edge computing minimizes latency, ensures quicker responses, and supports applications like autonomous driving, smart infrastructure, and industrial IoT systems. Network slicing enables the creation of multiple virtual networks on the same physical infrastructure, each designed to meet distinct service requirements, performance standards, or security protocols. Together, these approaches improve network efficiency, flexibility, and scalability, catering to applications that require low-latency, high-reliability communication. Their adoption is growing rapidly as businesses and service providers seek advanced, responsive, and optimized connectivity solutions.

According to the Linux Foundation’s State of the Edge report, global capital expenditure on edge computing infrastructure is projected to reach $800 billion by 2028, with telecom operators and cloud providers leading the investment.

Market Dynamics:

Driver:

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Growing demand for low-latency applications

Rising demand for applications requiring minimal latency is driving the growth of the edge computing and network slicing market. Real-time applications like augmented reality, autonomous systems, industrial automation, and live video analytics need rapid data processing with negligible delays. Edge computing addresses this by performing computations close to data sources, significantly lowering latency and enabling swift responses. Network slicing enhances the approach by creating customized virtual networks designed for specific performance standards. Combined, these technologies empower businesses and service providers to efficiently manage latency-sensitive workloads, ensuring superior performance and seamless experiences for users who rely on immediate processing and uninterrupted real-time services across industries.

Restraint:

High implementation and infrastructure costs

The edge computing and network slicing market faces limitations due to substantial implementation and infrastructure costs. Establishing edge nodes requires multiple local data centers, upgraded network equipment, and specialized software, resulting in high capital expenditure. Network slicing adds further complexity, demanding advanced virtualization solutions, sophisticated network monitoring systems, and trained technical staff. These financial requirements can be challenging for small and mid-sized organizations, potentially slowing market adoption. Moreover, ongoing operational expenses, system maintenance, and periodic upgrades add to the economic burden. Consequently, these high costs restrict the widespread deployment of edge computing and network slicing, particularly in emerging markets, hindering market expansion despite growing demand for efficient, low-latency network solutions.

Opportunity:

Growth in 5G network deployment

The worldwide rollout of 5G networks offers promising growth opportunities for the edge computing and network slicing market. 5G provides faster connectivity, minimal latency, and high reliability, enabling applications like autonomous vehicles, smart infrastructure, augmented/virtual reality, and industrial IoT. Edge computing enhances these capabilities by processing data closer to the source, reducing latency and conserving network bandwidth. Meanwhile, network slicing allows operators to deploy virtual

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networks customized for different 5G scenarios, improving efficiency and performance. With ongoing 5G expansion, companies and telecom providers can capitalize on edge computing and network slicing technologies to deliver innovative services, optimize operations, and gain a competitive edge in digital markets.

Threat:

Cyber security and data breach risks

The edge computing and network slicing market faces serious threats from cybersecurity breaches and data vulnerabilities. Distributing data processing across edge nodes increases potential entry points for hackers, malware, and unauthorized intrusions. Network slicing, despite its flexibility, can create security gaps if virtual networks are not adequately isolated or maintained. Sensitive information traveling through multiple virtual networks is at risk of interception, threatening privacy and compliance with regulations. Organizations must implement robust encryption, monitoring, and security measures to counter these risks. Inadequate cybersecurity could erode customer confidence, slow adoption, and pose a critical challenge to market growth, affecting the broader adoption of edge computing and network slicing technologies.

Covid-19 Impact:

The COVID-19 pandemic influenced the edge computing and network slicing market in both positive and negative ways. Increased remote work, virtual learning, and demand for digital services boosted the need for ultra-low-latency, high-performance network solutions, driving interest in edge computing and network slicing. Organizations prioritized strengthening their digital infrastructure to support real-time applications and remote operations. On the downside, supply chain interruptions, delayed equipment deliveries, and constrained IT budgets temporarily hindered deployments in certain regions. Despite these challenges, the pandemic underscored the necessity of reliable, scalable, and low-latency networks, encouraging long-term investments in edge computing and network slicing technologies to address the evolving connectivity and digital service requirements across multiple sectors.

The hardware segment is expected to be the largest during the forecast period

The hardware segment is expected to account for the largest market share during the forecast period, owing to its indispensable role in supporting low-latency processing and

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network efficiency. Edge computing depends on servers, gateways, and other specialized devices to manage data close to its source, while network slicing requires sophisticated network equipment for virtualized operations and optimized service delivery. The growing need for high-performance computing, energy-efficient solutions and scalable infrastructure continues to boost hardware demand. Real-time applications in autonomous vehicles, smart cities, and industrial IoT rely heavily on advanced hardware. Consequently, the hardware segment remains the dominant driver of market expansion and the backbone of technological implementation in this sector.

The telecom & IT segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the telecom & IT segment is predicted to witness the highest growth rate. This is driven by the surging need for robust, low-latency, and scalable network solutions. Telecom providers are deploying 5G infrastructure, edge nodes, and virtualized networks to accommodate data-heavy applications, IoT devices, and digital services. IT enterprises are utilizing edge computing to enable real-time data processing, enhance performance, and minimize delays. The integration of edge computing with cloud and 5G networks is fostering innovation and new service models. Consequently, the Telecom & IT segment is poised to grow rapidly, leading market expansion compared to other sectors.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, owing to its robust telecom infrastructure, early 5G adoption, and significant investment in digital transformation. The region hosts major technology companies, cloud providers, and telecom operators that are actively implementing edge computing and network slicing to support IoT applications, real-time analytics, and smart city initiatives. Strong demand for reliable, low-latency networks across enterprises and industrial sectors reinforces its market share. Government initiatives, research programs, and strategic collaborations further support growth. These factors collectively enable North America to maintain its dominance, making it the primary contributor to the global edge computing and network slicing market and a benchmark for technological advancement.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest

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CAGR. Rapid digitalization, extensive 5G network deployment, and rising investments in smart city and industrial IoT initiatives fuel this expansion. Countries including China, India, Japan, and South Korea are focusing on enhancing telecom infrastructure and edge computing solutions to enable real-time processing, low-latency services, and advanced analytics. The increasing number of connected devices and IoT applications across sectors further accelerates demand. Combined with government support, technological innovation, and active participation of startups, the Asia Pacific region is set to experience significant market growth, outpacing other global regions.

Key players in the market

Some of the key players in Edge Computing & Network Slicing Market include Ericsson, Huawei, Nokia, Cisco, ZTE, Ciena Corporation, Amdocs, Turk Telekom, Samsung, HPE (Hewlett Packard Enterprise), NTT, BT Group, Broadcom, Juniper Networks and Mavenir.

Key Developments:

In November 2025, Ericsson has signed a three-year deal to expand VodafoneZiggo's mobile network across the Netherlands. Ericsson will deploy its latest TDD Massive MIMO radio, the AIR 3255, which it claims offers up to 63% reduction in energy consumption and is 58% lighter than its predecessor, weighing only 12 kg.

In November 2025, Nokia, SoftBank sign network modernization deal in Japan. The agreement covers 4G modernization and 5G expansion across Western Japan using Nokia's AirScale portfolio. The two companies continue joint R&D efforts in AI-RAN and 6G, including Massive MIMO trials in Tokyo's 7 GHz band.

In September 2025, Huawei and EGYPTAIR have signed a strategic cooperation agreement designed to accelerate Egypt's digital transformation while boosting corporate travel services. The collaboration includes a Business Travel Agreement, making EGYPTAIR the official airline partner for Huawei employees, and a Memorandum of Understanding (MoU) to integrate Huawei's advanced ICT and AI solutions into the airline's operations.

Components Covered:

- Hardware

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Software

Services

Network Architectures Covered:

Public 5G Slicing

Private Enterprise Slicing

Hybrid Slicing Models

Deployment Models Covered:

On-premise Edge

Cloud-managed Edge

Multi-access Edge Computing (MEC)

Applications Covered:

Ultra-low Latency Media

Industrial Automation & Control

Remote Healthcare & Diagnostics

Smart Grid & Energy Optimization

Autonomous Mobility

Predictive Analytics & Maintenance

Immersive AR/VR Experiences

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End Users Covered:

- Telecom & IT
- Manufacturing
- Healthcare
- Automotive
- Energy & Utilities
- Retail & Logistics
- Urban Infrastructure

Regions Covered:

- North America
  - US
  - Canada
  - Mexico
- Europe
  - Germany
  - UK
  - Italy
  - France
  - Spain

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- Rest of Europe
- Asia Pacific
  - Japan
  - China
  - India
  - Australia
  - New Zealand
  - South Korea
  - Rest of Asia Pacific
- South America
  - Argentina
  - Brazil
  - Chile
  - Rest of South America
- Middle East & Africa
  - Saudi Arabia
  - UAE
  - Qatar
  - South Africa
  - Rest of Middle East & Africa

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What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

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Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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