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Edge Computing in Telecom Market Forecasts to 2034 – Global Analysis By Component (Hardware, Software and Services), Deployment Mode, Organization Size, Technology, Application, End User and By Geography

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Abstracts

According to Stratistics MRC, the Global Edge Computing in Telecom Market is accounted for $18.0 billion in 2026 and is expected to reach $155.0 billion by 2034 growing at a CAGR of 30.8% during the forecast period. Edge computing in telecom is the deployment of data processing and storage capabilities at the network edge, closer to end-users and connected devices. This architecture reduces latency, alleviates core network congestion, and enables real-time analytics for bandwidth-intensive applications. By integrating edge nodes with 5G infrastructure, telecom operators can support critical use cases such as autonomous vehicles, smart cities, and industrial automation. Consequently, edge computing enhances network responsiveness, improves customer experience, lowers data transmission costs, and unlocks new revenue streams through low-latency services.

Market Dynamics:

Driver:

Exponential Growth of 5G and Connected Devices Driving Edge Adoption

Traditional centralized cloud architectures struggle to handle the massive data volumes, ultra-low latency requirements, and bandwidth constraints of modern applications. Edge computing resolves these bottlenecks by processing data locally, reducing round-trip delays to milliseconds. This is critical for time-sensitive services like autonomous driving, remote surgery, and real-time industrial controls. Furthermore, telecom

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operators can offload core network traffic, avoiding expensive infrastructure upgrades. As 5G rollouts accelerate globally, the need for distributed intelligence at the edge becomes indispensable, directly driving investments in edge nodes, orchestration software, and integrated hardware solutions.

Restraint:

High Deployment Costs

Unlike centralized data centers, edge nodes require widespread physical placement at base stations, street cabinets, or customer premises, leading to higher hardware, real estate, and maintenance costs. Managing thousands of geographically distributed nodes introduces challenges in remote monitoring, software updates, security patching, and resource orchestration. Additionally, interoperability issues between legacy network equipment and new edge platforms can slow deployment timelines. The lack of standardized edge architecture across vendors further complicates multi-vendor environments.

Opportunity:

Emergence of Latency-Sensitive Applications

The rise of latency-sensitive and data-intensive applications, including augmented reality (AR), virtual reality (VR), cloud gaming, and industrial IoT (IIoT), presents a significant growth avenue for edge computing in telecom. These applications demand real-time processing that centralized clouds cannot deliver. By embedding compute capabilities at the edge, telecom operators can offer differentiated services such as ultra-low-latency connectivity, local data breakout, and edge AI inference. Furthermore, partnerships with content providers, autonomous vehicle fleets, and smart city initiatives allow telcos to monetize edge infrastructure through revenue-sharing models.

Threat:

Rising Cybersecurity Risks and Data Privacy Concerns

Each edge location, often physically unsecured, can be vulnerable to tampering, malware injection, or data interception. Compromised edge devices may serve as entry points to core networks, risking service disruption or sensitive data leaks. Additionally, the aggregation of data from multiple endpoints raises privacy concerns, particularly

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under regulations like GDPR. Ensuring consistent security policies, encryption, and access controls across thousands of geographically dispersed nodes is technically challenging and costly.

Covid-19 Impact:

The COVID-19 pandemic initially strained telecom networks due to unprecedented surges in remote work, online learning, and streaming traffic. Lockdowns delayed infrastructure deployment and disrupted supply chains for edge hardware. However, the crisis also underscored the urgency of decentralized computing to prevent network congestion and maintain service quality. Telecom operators accelerated edge investments to handle traffic spikes locally, reduce backhaul loads, and support telehealth and remote collaboration tools. The pandemic acted as a stress test, revealing that centralized models alone are insufficient for future disruptions.

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, due to the fundamental requirement for physical edge infrastructure, including edge servers, gateways, base station compute modules, and networking equipment. Telecom operators must deploy tangible hardware at thousands of edge locations to enable local processing. The ongoing rollout of 5G small cells and radio access network (RAN) upgrades further amplifies hardware demand. Additionally, replacement cycles and capacity expansions ensure sustained revenue.

The software segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the software segment is predicted to witness the highest growth rate. As edge hardware becomes commoditized, differentiation shifts to edge orchestration platforms, AI-driven analytics, security software, and application enablement tools. Telecom operators require sophisticated software to manage distributed nodes, automate lifecycle operations, and onboard third-party applications. The growing adoption of Network Function Virtualization (NFV) and Software-Defined Networking (SDN) further drives software demand.

Region with largest share:

During the forecast period, the North America region is expected to hold the largest market share, due to early and extensive 5G deployments by major telecom operators

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such as AT&T, Verizon, and T-Mobile. The presence of leading cloud and edge technology providers, including Amazon Web Services (AWS) and Microsoft Azure, fosters rapid innovation. Additionally, strong demand for autonomous vehicles, smart city projects, and industrial automation accelerates edge adoption.

Region with highest CAGR:

Over the forecast period, the Asia Pacific region is anticipated to exhibit the highest CAGR. Rapid 5G rollouts in China, India, Japan, and South Korea, combined with massive industrial IoT adoption in manufacturing hubs, fuel edge computing demand. Governments are actively supporting smart city initiatives and digital transformation, creating fertile ground for edge deployments. Additionally, local telecom operators and technology vendors are aggressively investing in edge infrastructure to capture growing data traffic, making Asia Pacific the fastest-growing regional market.

Key players in the market

Some of the key players in Edge Computing in Telecom Market include Huawei Technologies Co., Ltd., Nokia Corporation, Ericsson AB, Cisco Systems, Inc., Hewlett Packard Enterprise (HPE), IBM Corporation, Microsoft Corporation (Azure Edge), Amazon Web Services (AWS), Intel Corporation, Dell Technologies Inc., ZTE Corporation, Juniper Networks, Inc., AT&T Inc., Verizon Communications Inc., and Google LLC.

Key Developments:

In April 2026, IBM announced a strategic collaboration with Arm to develop new dual?architecture hardware that helps enterprises run future AI and data intensive workloads with greater flexibility, reliability, and security. IBM's leadership in system design, from silicon to software and security, has helped enterprises adopt emerging technologies with the scale and reliability required for mission?critical workloads.

In March 2026, Oracle announced the latest updates to Oracle AI Agent Studio for Fusion Applications, a complete development platform for building, connecting, and running AI automation and agentic applications. The latest updates to Oracle AI Agent Studio include a new agentic applications builder as well as new capabilities that support workflow orchestration, content intelligence, contextual memory, and ROI measurement.

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Components Covered:

- Hardware
- Software
- Services

Deployment Modes Covered:

- On-Premises Edge
- Cloud-Based Edge
- Hybrid Edge Infrastructure

Organization Sizes Covered:

- Large Enterprises
- Small & Medium Enterprises (SMEs)

Technologies Covered:

- Multi-Access Edge Computing (MEC)
- Edge AI & Machine Learning
- Network Function Virtualization (NFV)
- Software-Defined Networking (SDN)
- 5G-Enabled Edge Infrastructure

Applications Covered:

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- Content Delivery & CDN Optimization
- IoT & Industrial IoT (IIoT)
- Smart Cities
- AR/VR & Immersive Experiences
- Autonomous Vehicles
- Remote Monitoring
- Network Optimization

End Users Covered:

- Telecom Operators
- Enterprises
- Government & Public Sector
- Other End Users

Regions Covered:

- North America
  - US
  - Canada
  - Mexico
- Europe
  - Germany

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- UK
- Italy
- France
- Spain
- 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

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Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

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 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2032 and 2034
- 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)

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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 Rest of the World (RoW) are also represented in the same manner as above.

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