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Open RAN and Virtualized RAN Market Forecasts to 2032 – Global Analysis By Solution Type (Radio Units, Distributed Unit, Centralized Unit, RAN Intelligent Controller, vRAN Software & Stack, Fronthaul & Transport Solutions, Integration, Deployment & Professional Services, Managed Services & OSS/BSS Integration, Test, Certification & Interoperability Tools, Security Solutions and Other Solution Types), Deployment Model, Network, Application, End User and By Geography

https://marketpublishers.com/r/O1D01B2DD680EN.html
Date: April 2025
Pages: 200
Price: US$ 4,150.00 (Single User License)
ID: O1D01B2DD680EN

Abstracts

According to Stratistics MRC, the Global Open RAN and Virtualized RAN Market is accounted for $5.65 billion in 2025 and is expected to reach $27.87 billion by 2032 growing at a CAGR of 25.6% during the forecast period. Open RAN is a disaggregated radio access network architecture that promotes interoperability by using open interfaces and standards, allowing multi-vendor components to integrate seamlessly. It enhances flexibility, cost-efficiency, and innovation across the RAN ecosystem. Virtualized RAN (vRAN) decouples hardware from software by running RAN functions on virtual machines or containers over commercial off-the-shelf servers. This enables dynamic scaling, centralized management, and reduced operational costs while supporting cloud-native deployments and automation across diverse network environments.

According to Journal of Network and Systems Management Open RAN adoption can reduce total network deployment costs by up to 30% due to vendor-neutral

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infrastructure and hardware-software decoupling. Additionally, a study published by IEEE in 2024 highlights that Virtualized RAN (vRAN) implementations can improve spectral efficiency by 20–25% and reduce operational expenses through centralized management and dynamic resource allocation.

Market Dynamics:

Driver:

Increasing demand for vendor-neutral infrastructure

Open RAN and vRAN allow operators to integrate hardware and software from multiple vendors, enhancing flexibility and cost efficiency. This modular approach supports faster innovation cycles and simplifies network upgrades. As 5G deployments scale globally, vendor-neutral infrastructure is becoming essential for agile, scalable, and future-proof networks. The push for disaggregated systems is also aligned with broader goals of network automation and cloud-native transformation.

Restraint:

Integration complexity across multi-vendor environments

Operators must invest in skilled personnel and sophisticated management platforms to maintain performance parity with traditional RAN systems. Ensuring seamless interoperability between disaggregated components requires advanced orchestration and rigorous testing. These complexities can delay deployments and increase operational overhead. Additionally, lack of standardized implementation frameworks across regions adds to the technical burden, especially for legacy-heavy networks transitioning to open architectures.

Opportunity:

Government-backed initiatives and funding

Initiatives in the U.S., Japan, India, and the EU aim to foster domestic telecom innovation and reduce reliance on foreign vendors. Public-private collaborations are accelerating R&D in open interfaces, security protocols, and energy-efficient designs. These efforts are also creating opportunities for startups and SMEs to enter the telecom ecosystem with specialized solutions. Regulatory support is expected to catalyze

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commercial deployments and stimulate long-term market growth.

Threat:

Environmental and climate challenges, delayed monetization for operators

Climate-related disruptions such as extreme weather events and energy instability pose risks to Open RAN infrastructure, especially in remote or under-resourced regions. Additionally, operators may face delayed returns on investment due to the upfront costs of transitioning from legacy systems. The monetization timeline for Open RAN and vRAN can be extended by integration hurdles, performance tuning, and evolving business models. Without clear ROI benchmarks, some operators may hesitate to scale deployments, particularly in markets with low ARPU or regulatory uncertainty.

Covid-19 Impact:

The pandemic reshaped telecom priorities, accelerating digital transformation and remote connectivity needs. Open RAN and vRAN gained traction as operators sought scalable, cloud-native solutions to meet surging data demands. Virtual trials and remote integration became more common, reducing deployment timelines. The shift toward decentralized architectures and edge computing was further reinforced, positioning Open RAN as a resilient and adaptive framework in post-pandemic network planning.

The RAN intelligent controller segment is expected to be the largest during the forecast period

The RAN intelligent controller segment is expected to account for the largest market share during the forecast period due to its pivotal role in enabling real-time network optimization and automation. RICs facilitate dynamic resource allocation, traffic steering, and energy efficiency across multi-vendor environments. Their integration with AI/ML algorithms enhances decision-making and supports closed-loop control. As operators prioritize intelligent orchestration, RICs are becoming central to Open RAN deployments. The segment benefits from active standardization efforts and growing interest in programmable network functions.

The public mobile operator deployments segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the public mobile operator deployments segment is predicted

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to witness the highest growth rate fueled by 5G expansion and spectrum liberalization. These operators are leveraging open architectures to reduce costs, improve scalability, and accelerate rural coverage. Strategic partnerships with cloud providers and system integrators are enabling large-scale rollouts. The segment is also benefiting from regulatory mandates promoting open interfaces and domestic innovation. As public networks evolve toward virtualization, this segment will remain a key growth engine.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share propelled by aggressive 5G rollouts, government-backed Open RAN initiatives, and a robust manufacturing base. Countries like Japan, India, and South Korea are leading in pilot deployments and ecosystem development. The region's diverse telecom landscape offers ample opportunities for modular, cost-effective RAN solutions. Local vendors and startups are contributing to innovation in hardware, software, and integration services. With strong policy support and rising mobile data consumption, Asia Pacific is set to remain the largest contributor to market revenue.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR driven by aggressive 5G rollouts, strong cloud infrastructure, and active government support for open network initiatives. Major telecom operators in the U.S. and Canada are investing in disaggregated RAN architectures to enhance scalability and reduce vendor dependency. The region also benefits from a mature ecosystem of hyperscalers, system integrators, and AI-driven orchestration platforms. As demand for flexible and cost-efficient network solutions rises, North America is expected to lead in innovation and deployment velocity.

Key players in the market

Some of the key players in Open RAN and Virtualized RAN Market include Rakuten Symphony, Mavenir, Altiostar, NEC Networks, Nokia, Ericsson, Samsung Networks, Parallel Wireless, Radisys, Intel, Qualcomm, Marvell, Dell Technologies, VMware, Red Hat, Fujitsu, Capgemini, and Accenture.

Key Developments:

In October 2025, Samsung was selected by Vodafone to provide Open RAN and vRAN

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solutions across Germany and Europe. The deal strengthens Samsung’s footprint in European telecom infrastructure.

In March 2025, Mavenir and e& UAE announced a multi-year partnership to deploy converged 5G packet core networks. The initiative supports AI-enabled services and cloud-native infrastructure across 4G and 5G.

In February 2025, Nokia completed its acquisition of Infinera to create a powerhouse in optical networks and data center infrastructure. The merger enhances Nokia’s product roadmap and expands its presence in the webscale segment.

Solution Types Covered:

- Radio Units
- Distributed Unit
- Centralized Unit
- RAN Intelligent Controller
- vRAN Software & Stack
- Fronthaul & Transport Solutions
- Integration, Deployment & Professional Services
- Managed Services & OSS/BSS Integration
- Test, Certification & Interoperability Tools
- Security Solutions
- Other Solution Types

Deployment Models Covered:

- Public Mobile Operator Deployments

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Private Networks & Enterprise Deployments

Neutral Host & Shared Infrastructure

Cloud / Edge-based Deployments

Hybrid Deployments

Networks Covered:

2G

3G

4G/LTE

5G

Future Network Standardsw

Applications Covered:

Macro Mobile Coverage

5G Standalone (SA) Core Integrations

Private Networks & Industry 4.0

Fixed Wireless Access (FWA)

IoT & Massive Machine-Type Communications (mMTC)

Public Safety & Government Networks

Other Applications

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End Users Covered:

- Telecom Operators
- Enterprises
- Government & Public Sector
- Cloud Service Providers
- Neutral Hosts
- Other End Users

Regions Covered:

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

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- 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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