

5G Radio Access Network (RAN) Market – Global Industry Size, Share, Trends, Opportunity, and Forecast Segmented By Component (Hardware, Software, Services), By Architecture Type (CRAN, ORAN, VRAN), By Deployment (Indoor, Outdoor), By End-use (Telecom Operators, Enterprises), By Region & Competition, 2021-2031F

<https://marketpublishers.com/r/52F133F88EFCEN.html>

Date: January 2026

Pages: 185

Price: US\$ 4,500.00 (Single User License)

ID: 52F133F88EFCEN

Abstracts

The Global 5G Radio Access Network (RAN) Market will grow from USD 18.88 Billion in 2025 to USD 55.31 Billion by 2031 at a 19.62% CAGR. The Global 5G Radio Access Network (RAN) Market comprises the essential radio interface infrastructure, such as base stations and massive MIMO antennas, that connects user devices to the mobile core network using New Radio technology.

Key Market Drivers

The exponential surge in mobile data traffic and high-bandwidth consumption serves as the primary catalyst for the Global 5G Radio Access Network (RAN) Market. As consumers and enterprises increasingly utilize data-intensive applications such as high-definition video streaming and cloud gaming, network operators are compelled to densify their infrastructure and integrate massive MIMO technologies to sustain throughput. This pressure to accommodate escalating loads is quantified by recent traffic metrics.

Key Market Challenges

The substantial capital expenditure required for network densification acts as a

significant restraint on the Global 5G Radio Access Network Market. Operators face immense costs associated with acquiring new physical sites, installing additional base stations, and managing the increased power consumption of advanced radio equipment. This financial burden creates a cautious investment environment where carriers must carefully balance the need for coverage against available capital. Consequently, many network providers delay the purchasing of essential radio interface infrastructure, which directly slows the revenue cycle for hardware suppliers and limits the overall expansion of the market.

Key Market Trends

The Integration of AI and Machine Learning for Network Automation is becoming a pivotal trend as operators seek to manage the escalating complexity of disaggregated radio environments. By embedding intelligent algorithms directly into the Radio Access Network, providers can automate routine maintenance, optimize spectral efficiency in real-time, and implement predictive fault resolution, thereby significantly reducing operational expenditures. This technological shift towards autonomous network management is evidenced by the growing financial commitment from the industry to upgrade legacy systems.

Key Market Players

Nokia Corporation

Ericsson AB

Huawei Technologies Co., Ltd.

Samsung Electronics Co., Ltd.

ZTE Corporation

NEC Corporation

Cisco Systems, Inc

Fujitsu Limited.

CommScope, Inc.

VMware, Inc.

Report Scope:

In this report, the Global 5G Radio Access Network (RAN) Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

5G Radio Access Network (RAN) Market, By Component:

Hardware

Software

Services

5G Radio Access Network (RAN) Market, By Architecture Type:

CRAN

ORAN

VRAN

5G Radio Access Network (RAN) Market, By Deployment:

Indoor

Outdoor

5G Radio Access Network (RAN) Market, By End-use:

Telecom Operators

Enterprises

5G Radio Access Network (RAN) Market, By Region:

North America

United States

Canada

Mexico

Europe

France

United Kingdom

Italy

Germany

Spain

Asia Pacific

China

India

Japan

Australia

South Korea

South America

Brazil

Argentina

Colombia

Middle East & Africa

South Africa

Saudi Arabia

UAE

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global 5G Radio Access Network (RAN) Market.

Available Customizations:

Global 5G Radio Access Network (RAN) Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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