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Global Radio Modem Market Size Study & Forecast, by Frequency Band (License Free, UHF, Wi-Fi, and VHF), by Communication Channel (Point to Multi-Point and Point to Point), by Operating Range (Short and Long), by Application, and Regional Forecasts 2025–2035

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Abstracts

The Global Radio Modem Market is valued at approximately USD 1.05 billion in 2024 and is anticipated to grow at a CAGR of 8.9% over the forecast period 2025–2035. A radio modem is a device that transmits digital data between two or more points using radio waves rather than physical cables or wired infrastructure. It forms the backbone of numerous modern communication systems—bridging industrial, agricultural, and transportation networks with reliable, low-latency, and long-range data transmission. As industries accelerate their shift toward automation and IoT-driven connectivity, radio modems are being recognized as essential tools for real-time data exchange in remote or harsh environments where wired solutions are impractical. The global market is witnessing strong traction owing to the rapid proliferation of smart infrastructure, the growing use of unmanned systems, and the expansion of industrial telemetry and SCADA (Supervisory Control and Data Acquisition) systems. Furthermore, as 5G and next-generation wireless standards evolve, hybrid integration with radio modems is expected to enhance communication resilience, scalability, and energy efficiency across diverse industrial landscapes.

The surging adoption of radio modems in mission-critical applications—from precision agriculture and fleet management to renewable energy operations—has significantly boosted their demand worldwide. These devices are pivotal in connecting field-based assets, enabling seamless wireless communication over vast geographic terrains. According to the International Telecommunication Union (ITU), global machine-to-machine (M2M) connections are expected to exceed 30 billion by 2030, underlining the

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importance of wireless data modems in industrial automation and smart city ecosystems. Additionally, technological advancements in UHF and VHF frequency bands have extended communication ranges, improved bandwidth efficiency, and minimized interference. Despite the market's strong growth potential, challenges such as spectrum regulations, network interoperability, and the need for encryption to prevent data breaches continue to hinder widespread deployment. Nevertheless, as industries pivot toward real-time analytics and wireless control systems, the global radio modem market is expected to flourish during the forecast period of 2025–2035.

The detailed segments and sub-segments included in the report are:

By Frequency Band:

- License Free
- UHF
- Wi-Fi
- VHF

By Communication Channel:

- Point to Multi-Point
- Point to Point

By Operating Range:

- Short
- Long

By Application:

- Transportation and Logistics

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- Utilities
- Mining
- Oil & Gas
- Agriculture
- Construction
- Other Industrial Applications

By Region:

North America

- U.S.
- Canada

Europe

- UK
- Germany
- France
- Spain
- Italy
- Rest of Europe

Asia Pacific

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China

India

Japan

Australia

South Korea

Rest of Asia Pacific

Latin America

Brazil

Mexico

Middle East & Africa

UAE

Saudi Arabia

South Africa

Rest of Middle East & Africa

UHF Frequency Band Expected to Dominate the Market

Among the various frequency bands, the Ultra High Frequency (UHF) segment is anticipated to dominate the global radio modem market throughout the forecast period. UHF modems offer superior signal penetration and stability, making them ideal for long-range communication in complex industrial and outdoor environments. Their widespread usage in oilfields, mining operations, and agricultural automation has made UHF the preferred choice for industrial-grade wireless networks. Moreover, the ongoing

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evolution of smart grid systems and remote monitoring solutions across the energy and utilities sector further solidifies the dominance of UHF technology. Meanwhile, Wi-Fi-based modems are emerging as a promising segment, catering to high-bandwidth and short-range applications such as urban transport systems and in-building wireless networks.

Point-to-Multi-Point Communication Channels Lead in Revenue Contribution

The Point-to-Multi-Point communication channel segment currently leads the market in terms of revenue contribution. This architecture enables a single base modem to communicate with multiple remote terminals simultaneously, enhancing operational efficiency and reducing network infrastructure costs. Industries such as utilities, transportation, and agriculture are increasingly deploying point-to-multi-point radio modems to manage distributed assets, monitor performance, and optimize real-time control systems. The scalability and versatility of these networks make them indispensable in smart cities and industrial automation environments. Conversely, the Point-to-Point configuration is projected to witness steady growth due to its adoption in secure, dedicated communication links across defense, emergency response, and energy sectors where reliability and low latency are critical.

The key regions considered for the Global Radio Modem Market study include Asia Pacific, North America, Europe, Latin America, and the Middle East & Africa. North America is projected to dominate the market in 2025, attributed to its robust communication infrastructure, strong presence of industrial IoT vendors, and early adoption of advanced wireless technologies. The region’s extensive use of radio modems in oil & gas monitoring, precision agriculture, and intelligent transportation systems further cements its leadership position. Europe follows closely, driven by expanding smart manufacturing initiatives and the deployment of Industry 4.0 technologies. Meanwhile, the Asia Pacific region is expected to record the fastest growth rate during 2025–2035 due to the increasing adoption of digital communication systems in agriculture, energy distribution, and logistics across China, India, and Southeast Asia. Rapid urbanization, supportive government initiatives for smart infrastructure, and widespread deployment of automation technologies are fueling this regional surge.

Major market players included in this report are:

Schneider Electric SE

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Motorola Solutions, Inc.

Advantech B+B SmartWorx

FreeWave Technologies, Inc.

ABB Ltd.

Simrex Corporation

Campbell Scientific, Inc.

Digi International Inc.

Pro4 Wireless AB

Encom Wireless Data Solutions

Cohda Wireless Pty Ltd.

GE MDS LLC

Satel Oy

Atim Radiocommunications

Westermo Network Technologies AB

Global Radio Modem Market Report Scope:

Historical Data – 2023, 2024

Base Year for Estimation – 2024

Forecast period – 2025–2035

Report Coverage – Revenue forecast, Company Ranking, Competitive Landscape, Growth factors, and Trends

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Regional Scope – North America; Europe; Asia Pacific; Latin America; Middle East & Africa

Customization Scope – Free report customization (equivalent to up to 8 analysts' working hours) with purchase. Addition or alteration to country, regional & segment scope*

The objective of the study is to define market sizes of different segments and countries in recent years and to forecast the values for the coming years. The report is designed to incorporate both qualitative and quantitative aspects of the industry across the regions involved in the study. The report also provides detailed insights into critical growth drivers, challenges, and emerging opportunities that will shape the future trajectory of the market. Furthermore, it identifies promising micro-markets for investment, provides an in-depth competitive landscape analysis, and examines the product portfolios and strategic initiatives of key industry participants.

Key Takeaways:

Market Estimates & Forecast for 10 years from 2025 to 2035.

Annualized revenues and regional-level analysis for each market segment.

Detailed analysis of the geographical landscape with country-level insights for major regions.

Comprehensive overview of competitive dynamics and company profiles.

Strategic recommendations for both new entrants and established market participants.

In-depth assessment of market demand and supply trends shaping industry growth.

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