Global 5G Infrastructure Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 120 pages | Mordor Intelligence

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Report description:

The 5G infrastructure market is expected to register a CAGR of 53.01% during the forecast period. Critical factors like the continuously growing Machine-to-Machine/IoT Connections, primarily due to the Involvement of Various Devices and the surge in the overall demand for Mobile Data Services throughout the globe, are significantly driving the market.

Key Highlights
The 5G infrastructure market is projected to transform the broadband services domain and provide connectivity across numerous end-user verticals. According to the GSMA, 5G networks have achieved 45% urban coverage in early deployment trials. Further, China, India, and other countries aimed to deploy a 5G network which will necessitate significant financial investment in 5G-capable infrastructure.
Moreover, there have been a series of collaborations, mergers, and acquisitions by various firms in the region. For instance, in April 2021, Mavenir and Nvidia collaborated on new solutions in various areas, including using Nvidia GPUs in Mavenir's data center systems. The collaboration progressed to Mavenir's O-RAN DU systems utilizing general-purpose GPUs and Nvidia SmartNIC cards to offload computation-intensive fronthaul functions capable of handling 100s of Gigabit per second of data throughput. Furthermore, in July last year, Rakuten Mobile Inc. verified data transfer on a 5G Standalone (SA) mobile network in collaboration with the Tokyo Institute of Technology at the Tokyo Tech's Ookayama Campus. The data transmission was carried out using a 5G-SA compatible device on the 5G network at the campus to verify the 5G SA connection.
Market vendors like Intel have announced a new system on chip (SoC) designed specifically for next-generation mobile base stations. Similarly, according to Iteq, a copper-clad laminate (CCL) provider, China is investing significantly in developing and deploying 5G services with the government and local players. In addition, according to the Federal Network Agency of Germany's 5G frequency mandates, 98% of German households must have fast mobile internet by 2022. Further, All significant highways, highways, and railroads must be equipped with 5G by 2024, which is expected to significantly increase the country's demand for

small-cell and NFV solutions.
With the outbreak of COVID-19, market vendors have delayed their service offerings. For instance, Huawei announced delays in launching 5G mobile networks in Europe. Additionally, the longer COVID-19 sustains, the more difficult it becomes for the functioning of the supply chain in the infrastructure market through bottlenecks in access, production, and distribution.

5G Infrastructure Market Trends

5G Radio Access Networks Expected to Witness Significant Growth

The migration to 5G has become a critical factor, as it will enable higher bandwidths and lower latencies, to name a few. RAN disaggregation enabled by cloud RANs and open interfaces allow carriers to benefit from a broader ecosystem. Hence, the leading carriers are issuing requests for information (RFIs) for RAN disaggregation and open solutions. It is because they can choose the best solutions for the different parts of the RAN.
For instance, edge servers for virtualized baseband units (BBUs) can also run applications within the edge cloud and RAN to reduce latency. The amalgamation of 5G NR with a virtualized RAN architecture is expected to open up new opportunities for low latency and IoT services. Furthermore, major players are indulging themselves in introducing various 5G commercial deployments throughout the globe. For instance, in the United Kingdom, major market players, including EE, Vodafone UK, Three UK, and O2 UK, launched 5G commercial deployments, driving the market's growth exponentially.
Moreover, the rise in the partnership among multiple stakeholders witnessed increased demand for 5G radio access networks. For instance, in July last year, Samsung Electronics announced to conduct of Australia's first 5G Virtual Radio Access Network trial on the 26GHz spectrum band using an integrated mm-wave solution for mobile and fixed wireless services in collaboration with TPG Telecom. As part of the trial, Samsung will deploy its vRAN solution in TPG Telecom's Innovation Lab in Glebe, New South Wales. Samsung will also deploy its latest 5 G mmWave product, Compact Micro, for broader coverage in the Glebe area.
Earlier this year, STL, a pioneering digital network integrator, declared a partnership with Analog Devices, Inc. to provide 5G O-RU (Open RAN radio units). The two businesses will build various 5G-ready solutions to increase the variety of commercially accessible O-RUs and promote the expansion of Open RAN networks. Also, as a crucial part of this collaboration, Analog Devices, and STL would work with other ecosystem providers, including top power amplifier (PA) vendors, to broaden the scope of STL's Garuda O-RU indoor small cell offerings.
As per 5G Americas, the number of 5G subscriptions is anticipated to grow steadily over the next few years, reaching 5 billion by 2026. It includes increases of 900 million from next year to the upcoming year and 700 million from the current year to the next in subscription growth. This rise in the overall growth of 5G subscriptions is anticipated to create immense growth opportunities for the market throughout the forecast period.

Asia Pacific Expected to Witness Significant Growth

The Asia- Pacific region is witnessing an upward-growing trend of investment in 5G infrastructure; China is one of the largest investors in 5G technology within the region. The growing effort by the Chinese government, telecom operators, and vendors to deploy 5G is bringing more investment into the market. The country is also home to some prominent telecom 5G infrastructure providers.
According to the GSMA, by 2025, 40-50% of China's mobile users may be using 5G. The country is gaining more in terms of network convergence, network virtualization, and network slicing. The country also started to include standalone as part of its initial 5G deployment, owing to building a 5G network from the ground rather than spending the time to evolve a 4G network into a 5G network. It has also helped the growth of local vendors.

Moreover, vendors like China Tower Corporation Limited are in joint ventures with China Unicom, China Mobile, and China Telecom, the country's three big mobile service providers. The company is witnessing significant growth over the last few years due to growing investment in the Chinese 5G infrastructure market.
Also, the rise in Collaboration and product innovations further drive the region's growth significantly. For instance, in July last year, Malaysia announced Swedish telecommunications company Ericsson as its partner to develop a 5G network and ecosystem. Under this deal, Ericsson will be responsible for the end-to-end development of the 5G networks in Malaysia at an overall cost of MYR 11 billion (USD 2.45 billion).
Moreover, companies are investing in developing 5G core services and architecture. For instance, in October this year, ZTE Corporation, a global ICT solutions provider, and AIS jointly fueled up the 5G Advanced evolution to augment the digital transformation through A-Z Center in Thailand. Also, to construct a 5G ubiquitous access network with integrated low, medium, and high-frequency multi-band, industry-leading coverage, capacity, and user experiences, ZTE has been working with AIS as a crucial partner.

5G Infrastructure Market Competitor Analysis

The Global 5G Infrastructure market is moderately competitive, with many regional and global players. High investments in R&D, new product launches, market initiatives, agreements, joint ventures, mergers and acquisitions, partnerships, and collaborations, are the prime growth strategies companies adopt to sustain the competition. Key players in the market are Cisco Systems Inc.,

In October 2022 - Reliance Jio chose Nokia as a key supplier to provide 5G Radio Access Network (RAN) hardware from its AirScale portfolio nationwide in a multi-year agreement. According to the agreement, Nokia will offer base stations, high capacity 5G Massive MIMO antennas, Remote Radio Heads (RRH) that support various spectrum bands, and self-organizing network software.

In August 2022 - Nokia declared that it had agreed with top telecom provider Bharti Airtel to deploy a 5G radio access network (RAN). This multi-year agreement supports Bharti Airtel's ambition to usher India into the 5G era.

Additional Benefits:

The market estimate (ME) sheet in Excel format
3 months of analyst support

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