

# India 5G Network Infrastructure Market - Strategic Insights and Forecasts (2026-2031)

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## Abstracts

The India 5G Network Infrastructure market is forecast to grow at a CAGR of 26.9%, reaching USD 17.1 billion in 2031 from USD 5.2 billion in 2026.

India's 5G network infrastructure market is witnessing rapid expansion, driven by a nationwide deployment of base stations, regulatory support, and a growing industrial demand for low-latency, high-capacity networks. The Ministry of Telecommunications' Production-Linked Incentive (PLI) scheme has boosted domestic manufacturing of RAN and Core components, creating a robust local supply chain. Operators are adopting a mix of Standalone (SA) and Non-Standalone (NSA) architectures, which drives demand for both cloud-native core solutions and conventional 4G-integrated deployments. The industrial, manufacturing, and enterprise sectors are increasingly leveraging private 5G networks for mission-critical applications, further intensifying the need for Edge Infrastructure, network slicing, and advanced orchestration platforms.

## Market Drivers

The extensive rollout of 5G infrastructure, including over 4.69 lakh Base Transceiver Stations (BTSs) installed across 99.6% of districts by early 2025, underpins strong demand for RAN, Core, transport, and edge network components. High mobile data consumption and increasing 5G-enabled device penetration necessitate network densification and expanded transport capacity to maintain service quality.

Government policies, particularly the PLI scheme, incentivize domestic production of key network equipment such as Massive MIMO antennas and baseband units, enhancing local supply chain resilience. Spectrum allocation and mandatory rollout obligations compel operators to procure and deploy infrastructure in a time-bound

manner, providing a predictable floor for market demand.

The transition to Standalone (SA) architecture for certain operators drives adoption of cloud-native 5G Core networks and advanced network management systems. Enterprise and industrial adoption of private 5G networks for manufacturing automation, logistics optimization, and Industry 4.0 initiatives increases the demand for low-latency Edge Infrastructure and secure, isolated network slices.

### Market Restraints

A primary constraint is the limited development of ultra-low-latency enterprise use cases beyond enhanced mobile broadband, which delays the need for advanced core and edge deployments. High CapEx requirements for dense network construction, particularly mmWave and fiber backhaul, may restrict rapid scaling.

Global dependency on semiconductor and specialized network hardware exposes operators to price volatility and logistical challenges. Integration of SA and NSA architectures, combined with private network deployments, increases technical complexity and operational risk, requiring skilled expertise for deployment and management.

### Technology and Segment Insights

By component, RAN, 5G Core, transport/backhaul, Edge Infrastructure, and Network Management & Orchestration constitute the primary growth segments. Deployment mode analysis highlights significant investment in Standalone (SA) networks, which support network slicing, ultra-reliable low-latency communication (URLLC), and massive machine-type communication (mMTC).

By spectrum, mid-band (1–6 GHz) and high-band/mmWave (>24 GHz) drive demand due to high-capacity requirements, while low-band (

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