

# China 5G Network Security Market - Strategic Insights and Forecasts (2026-2031)

<https://marketpublishers.com/r/C10B5837BAE0EN.html>

Date: February 2026

Pages: 83

Price: US\$ 2,850.00 (Single User License)

ID: C10B5837BAE0EN

## Abstracts

The China 5G Network Security market is forecast to grow at a CAGR of 9.2%, reaching USD 3.9 billion in 2031 from USD 2.5 billion in 2026.

The China 5G Network Security market is strategically aligned with the nation's ambition to lead in next-generation connectivity and AI-driven digital transformation. National regulations, including the Cybersecurity Law, Data Security Law, and Personal Information Protection Law, mandate stringent data protection and cross-border security controls for critical information infrastructure. Coupled with accelerated 5G-A/5.5G deployment and the proliferation of Enterprise 5G Networks, these factors create strong demand for cloud-native, AI-enhanced security solutions. The transition from hardware-centric perimeters to distributed, software-defined architectures shifts the security focus to the Edge, Multi-access Edge Computing (MEC), and cloud layers, driving comprehensive investment across telecom operators, industrial enterprises, and government sectors.

## Market Drivers

Government regulation forms a core driver, compelling operators and enterprises to comply with strict data classification, cross-border transfer, and privacy mandates. The launch of 5G-Advanced equipment and network slices expands the attack surface, increasing demand for specialized Network Encryption, Identity & Access Management (IAM), and Security Analytics & Monitoring solutions. Enterprise adoption of private 5G networks in manufacturing, aviation, and energy sectors further fuels market growth, as these networks require localized, low-latency security capable of integrating with Operational Technology (OT) systems. Cloud-native 5G Core architecture and MEC proliferation amplify the necessity for Zero Trust frameworks, micro-segmentation, and

virtualization-aware security services.

## Market Restraints

The complexity of cloud-native and multi-vendor 5G networks constrains the speed of deployment and increases operational costs. Enterprises face challenges in integrating distributed network functions with legacy IT and OT security frameworks. Supply chain dependencies on high-performance semiconductors, critical hardware components, and advanced algorithm development create potential bottlenecks. Additionally, the market is highly dependent on domestic vendors due to strategic, regulatory, and sovereign security requirements, which may limit external supplier participation.

## Technology and Segment Insights

By solution, Cloud Security & Virtualization Security is experiencing strong adoption due to 5G's Service-Based Architecture (SBA) and virtualization requirements. Firewalls & Threat Protection, DDoS Protection, IAM, and Network Encryption remain critical across both public and private networks. Managed Security Services (MSS), Consulting & Integration, and Security Testing & Compliance support enterprises navigating operational and regulatory complexities. Network architecture segments include 5G Security, RAN Security, Edge/MEC Security, and Transport Network Security. Deployment modes cover On-Premise and Cloud-Based models. End-users span Telecom Operators, Government & Defense Networks, and Enterprise 5G Networks, with industrial applications driving demand for ultra-reliable, low-latency connectivity secured at both core and edge layers.

## Competitive and Strategic Outlook

The Chinese 5G Network Security market is dominated by domestic integrated providers, notably Huawei and ZTE, who embed security directly into RAN, Core, and Transport components. Huawei leverages its full 5G-A/5.5G portfolio to deliver AI-driven Networks-for-AI and AI-for-Networks solutions, embedding advanced security within next-generation infrastructure. ZTE focuses on industrial and private networks, offering hyper-converged solutions like UniEngine ZXRAN and AgentGuard to secure AI-enabled applications and low-latency operational networks. Strategic focus across vendors emphasizes managed security services, compliance with national regulations, and integration of cloud-native, edge-aware solutions to meet the scale and complexity of China's rapidly expanding 5G ecosystem.

The China 5G Network Security market is poised for robust growth, driven by regulatory compliance requirements, 5G-Advanced adoption, and enterprise private network expansion. While multi-vendor complexity and supply chain dependencies present challenges, opportunities abound for providers offering integrated, cloud-native, AI-enhanced security solutions tailored for distributed 5G environments. Investment in Edge/MEC Security, cloud virtualization protections, and comprehensive IAM frameworks will be key to addressing the country's industrial, telecom, and government security needs.

### Key Benefits of this Report

**Insightful Analysis:** Gain detailed market insights across regions, customer segments, policies, socio-economic factors, consumer preferences, and industry verticals.

**Competitive Landscape:** Understand strategic moves by key players to identify optimal market entry approaches.

**Market Drivers and Future Trends:** Assess major growth forces and emerging developments shaping the market.

**Actionable Recommendations:** Support strategic decisions to unlock new revenue streams.

**Caters to a Wide Audience:** Suitable for startups, research institutions, consultants, SMEs, and large enterprises.

### What Businesses Use Our Reports For

Industry and market insights, opportunity assessment, product demand forecasting, market entry strategy, geographical expansion, capital investment decisions, regulatory analysis, new product development, and competitive intelligence.

### Report Coverage

Historical Data: 2021-2024, Base Year: 2025, Forecast Years: 2026-2031

Growth opportunities, challenges, supply chain outlook, regulatory framework,

and trend analysis

Competitive positioning, strategies, and market share evaluation

Revenue growth and forecast assessment across segments and regions

Company profiling including strategies, products, financials, and key developments

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