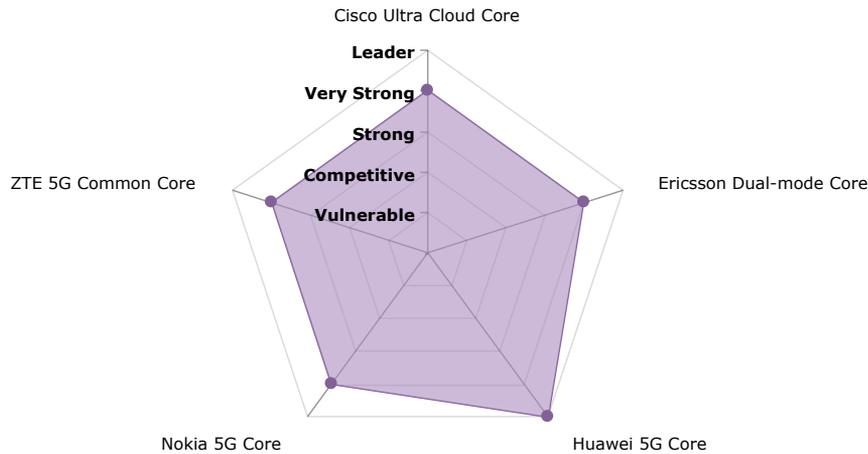


# 5G Mobile Core: Competitive Landscape Assessment

Glen Hunt | November 01, 2021

## Product Class Scorecard



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### Chart Type

Radar Chart  Bar Chart

## Market Overview

<b>Product Class</b>	5G Mobile Core (5GC)
<b>Market Definition</b>	<p>GlobalData's 5G Mobile Core report covers vendor solutions that support operators as they transition their mobile core networks to address the challenges of realizing 5G's potential. 3GPP's Release 16 specification adds specific support for 'standalone' (SA) network capabilities and requires a cloud-native 5G core architecture. Incumbent operator-based 5G SA network deployments will also require a converged core, capable of supporting all generations of mobile traffic. 5G SA networks also need to support multiple-cloud deployment models to meet customer expectations and provide cloud economics, such as cost, footprint, performance, reliability, and security that matches the service criteria. The 5G SA network model supports private network use cases and is an ideal solution for greenfield deployments.</p> <p>Moving beyond enhanced mobile broadband (eMBB), the market requires new service capabilities to support applications that require low latency, higher performance and a user plane distributed closer to the end user (MEC). In order for URLLC services to be successful, the mobile infrastructure must also include 5G Transport capable of deterministic performance and specified in IEEE 802.x Time Sensitive Networking (TSN) specifications. TSN details are beyond the scope of this report.</p> <p>This report assesses the established Tier 1 suppliers of mobile core software, the traditional mobile network equipment manufacturers (NEMs).</p>

Rated Competitors

Metric	Weight	Cisco	Ericsson	Huawei	Nokia	ZTE
Solution Maturity	20%	Strong	Leader	Leader	Very Strong	Very Strong
Architecture	5%	Very Strong	Leader	Leader	Leader	Leader
Service Types Supported	5%	Very Strong	Leader	Leader	Leader	Leader
Performance-Efficiency	15%	Very Strong	Very Strong	Leader	Leader	Very Strong
Multimedia	15%	Strong	Very Strong	Leader	Leader	Leader
Migration	10%	Very Strong	Very Strong	Leader	Very Strong	Leader
Automation	20%	Very Strong	Very Strong	Leader	Very Strong	Very Strong
Cloud Support	10%	Very Strong	Leader	Very Strong	Leader	Very Strong
Overall Ranking	100%	Very Strong	Very Strong	Leader	Very Strong	Very Strong
Score		3.72	4.44	4.62	4.49	4.43

Note: Score of 1-1.49 = Vulnerable/1.50-2.49=Competitive/2.50-3.49=Strong/3.50-4.49=Very Strong/4.50-5=Leader)

- Cisco
- Ericsson
- Huawei
- Nokia
- ZTE

#### Additional Competitors

- Casa Systems
- Mavenir
- Microsoft (Affirmed, Metaswitch)
- NetNumber
- Samsung
- Athonet

#### Changes Since Last Update

##### Vendor Updates:

- **June 2021:** VIL announced it will deploy Cisco's Ultra Packet Core across India to accelerate digital transformation and deliver VoWiFi.
- **June 2021:** Ericsson extended its relationships with Deutsche Telekom, Spanish operator MÁSMÓVIL, Google Cloud, and Vodafone to develop/deploy new 5G voice and data services.
- **July 2021:** Huawei launched its 5G-to-B solutions portfolio and reported its 5G core is deployed in China's three Tier 1 operator networks.
- **June-July 2021:** Nokia announced Africell will deploy its 5G SA core for its greenfield networks, and Dish Networks will deploy in the AWS cloud.
- **May-June 2021:** ZTE announced "5G Calling" to support ultra-HD quality, interaction and immersion voice and video services, and reported its 5G core is deployed in China's three Tier 1 operator networks.

##### Structural Report Changes:

- Updated 3GPP reference architecture to account for Release 16 developments, including charging and exposure functions, Service Control Proxy (SCP) and private network support.
- Updated the market drivers and buying criteria based on current market trends and observations and implemented weighted vendor rankings.
- Restructured and recalibrated metrics added several new metrics.

## Market Assessment

5G mobile core (5GC) solutions have matured significantly since the last GlobalData update, Non-standalone (NSA) deployments are commonplace with standalone (SA) deployments ramping quickly. In addition, the rigorous stream of standards developed by

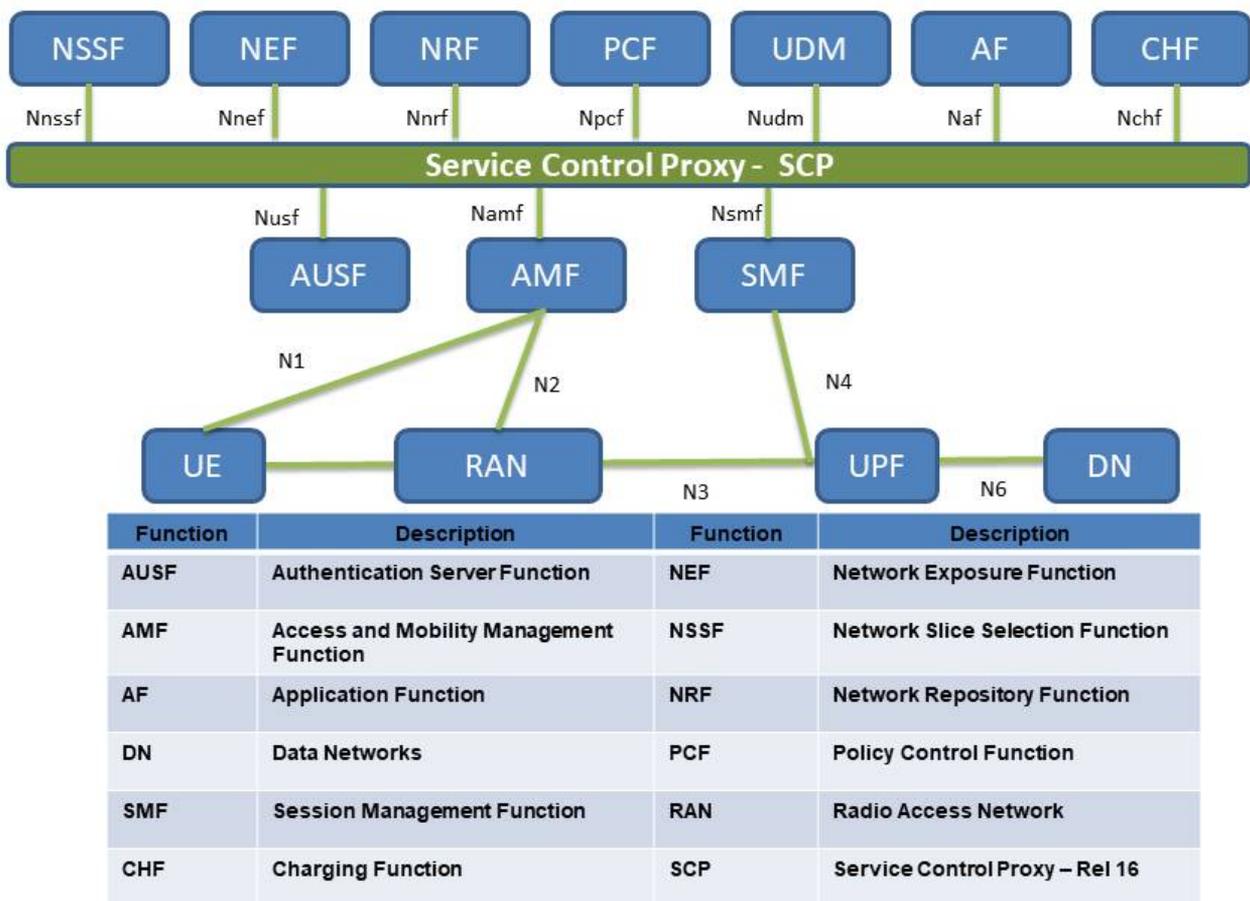
organizations such as 3GPP and ETSI, and forums such as Cloud Native Computing Foundation (CNCF), TM Forum, ONAP, and the O-RAN Alliance, has provided a solid implementation roadmap. Technologies such as cloud-native, microservices, hybrid cloud services, common databases, and open source software components and applications have also matured and establish the foundation of the 5GC.

Automation, artificial intelligence (AI), and continuous innovation/continuous deployment (CI/CD) are becoming ingrained in operator networks. Effective automation and visibility are crucial to handle the complexities of designing and managing the network. IMS plays a pivotal role in supporting voice and video services.

Incumbent operators generally needed a step-wise progression to balance revenue growth, but "greenfield" opportunities can move forward without the added burden of legacy service support. To address this need, 5GC vendor solutions also support multiple generations of mobile traffic with a common software architecture and are providing flexible migration strategies that help operators preserve 4G (and often 2G/3G) revenues while moving to 5G SA. Complexity is also being addressed through automation and advanced analytics.

The following diagram provides a high-level view of the 3GPP 5GC architecture.

## 3GPP Service-Based Architecture (SBA) and Key Network Functions (NFs)



Source: 3GPP Management, Orchestration, and Charging White Paper

All mobile core solutions covered in this report claim similar accomplishments:

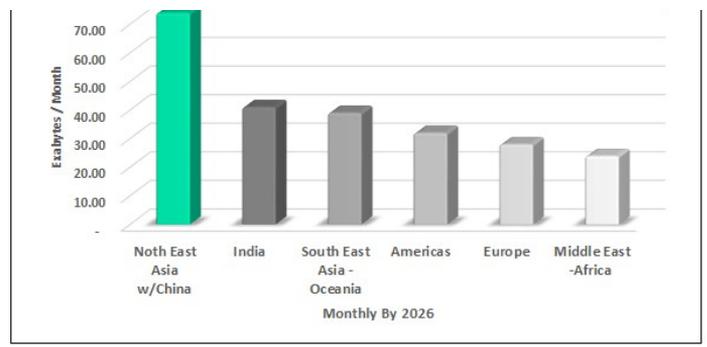
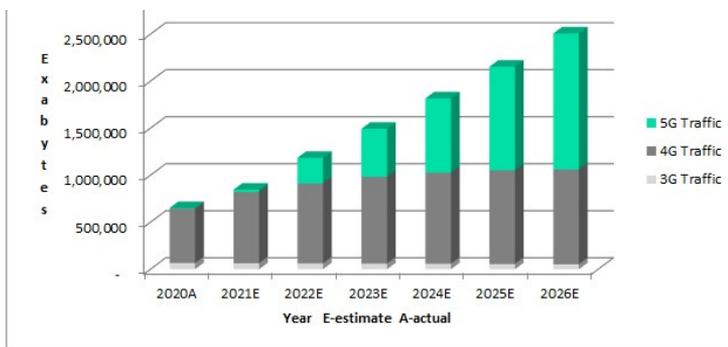
- Completed the transition to network virtualization (an 5G NSA requirement) and have implemented support for 5G New Radios.
- Completed the transition to a cloud-native architecture and containers (an 5G SA requirement) and have added the majority of Release 16 functionalities.
- Provided migration tools and supplied services to assist operators in the transition to NSA and are supporting the rollout of initial 5G SA services.
- Comply with 3GPP Release 15 (fully), 16 (mostly, with some caveats) and are working on R17 features, each successive release has provided new functionality as well as enhancements to existing functionality, such as IMT-2020 alignment, V2X, IoT, automation, enhancements for URLLC, broadcast services slicing, and other capabilities.

The 5GC mobile core debate has now moved to the challenge of moving forward with SA deployments to address seamless utilization of cloud resources, support for massive growth in subscribers and massive increases in traffic volume, instrumenting effective AI to drive down OpEx and improve new service deployment; however, as vendors all stress their “experience”, it becomes increasingly difficult to carve out differentiation.

### Market Drivers

• **Unabated Traffic Growth:** GlobalData’s Mobile Broadband Forecast identifies 4G/LTE as the dominant mobile traffic type until 2025 when 5G traffic reaches 51% of the total. Significant portions of 5G projected growth are based on private cellular and edge-based services which mandate a 5G SA core infrastructure. The graph below shows the traffic projections by generation and region. Northeast Asia traffic (including China) leads the market and is expected to reach 74 exabytes per month representing approximately 31% of the global mobile traffic by 2026.





Source: GlobalData Mobile Broadband Forecast and Ericsson Mobility Report

- Multi-generation Support:** The converged 5GC has become prevalent among incumbent operators; it leverages a single cloud-native software base and provides a consistent operating model to deliver and support all generations of mobile traffic.
- Growing 5G NSA and SA Deployments:** The GSA reports (as of September 2021) over 180 operators in 72 countries have launched commercial public 5G NSA services; and has identified 89 operators that are investing in public 5G SA networks, with at least 12 operators in nine countries/territories having launched live public 5G SA networks (vendor inputs indicate significantly more SA live network deployments).
- Private 5G Networks on the Rise:** The GSA notes 300+ organizations are engaged in trials and early private 5G network deployments. Support for private network deployments that target specific vertical markets represents the opportunity and challenge for mobile operators. Deployment through the operator has been the dominant deployment path; however, vendors are offering solutions directly to enterprises as well especially when dedicated spectrum is available.
- Network Complexity:** End-to-end network automation is deemed a necessity to address network complexity, reduce time to service and constrain OpEx. AI and machine learning are needed to improve overall customer experience and lifecycle management with CI/CD has been enthusiastically integrated operator CI/CD streams; but some are proceeding cautiously and continue to tightly control network upgrades and new feature rollouts.
- Cloud and Network Slicing:** Dynamic network slicing has increased in importance as operators explore the need to address new 5G applications, which may require specific performance (e.g., throughput, latency, connection capacity, timing), service assurance or security considerations. Slicing includes the 5GC, 5G transport and extends to the 5G RAN. Operators in certain regions offer public cloud-based solutions in cooperation with large cloud providers (such as Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform (GCP), Alibaba Cloud, and others).

## Buying Criteria

- Solution Maturity:** This metric evaluates 5G commercial progress and looks at live NSA and SA deployments, network scale and operator diversity. Based on vendor supplied metrics, the aggregate number of live NSA and SA networks reported is 276 and 18 respectively. The largest scale networks are found in Asia, specifically the three Tier 1 China-based operators, where Huawei and ZTE dominate and base their maturity claims on high reliability. Ericsson and Nokia also support networks in high scale networks in Europe and North America, as well as in Asia (including a presence in China).
- Solution Architecture:** This metric evaluates the extent to which the solution adopts a service-based architecture (SBA) and provides the functions identified in the 3GPP architecture and functional graphic (shown above), support for control and user plane separation (CUPS) and multi-access edge computing (MEC). The metric also evaluates support for service granularity, slicing, traffic management and resiliency. Vendors for the most part have checked all the boxes in this metric category.
- Service Types:** This metric evaluates support for multiple service types: all mobile generations (2G, 3G, 4G, and 5G), WiFi, and fixed wireless access (FWA) and regional market variants (North American markets – CBRS, public warning systems [PWS], etc.). IoT and industrial IoT are emerging. Mobile and fixed line vendors are adding additional access types such as fixed access (e.g., DSL and PON). Incumbent operators require support for all services; but for private networks and greenfield networks solutions fewer service types may be required.
- Performance and Efficiency:** This evaluates the performance and efficiency based on throughput per server, user data rates (sustained and peak) and latency metrics reported by each vendor. This metric is forward looking since given the current state of end point devices performance metrics are not currently stressed (e.g., 5G NR services); however, use applications such as factory

point devices performance metrics are not currently stressed (e.g., eMBB services); however, as applications such as factory automation materialize peak data rates and very low latency will become critical.

- **Multimedia Services:** This metric evaluates voice and video services including: VoLTE, VoNR (emerging in 2021), VoWiFi, and VoIP. Support is also provided for RCS/SMS/MMS, and interactive/immersive calling services (multi-device, IoT voice, SMS (SMSoNAS), AR with voice, SIM OTA, and P2P/A2P). IMS forms the foundation for all solutions, with several vendors having implemented a common multi-generational voice core (Huawei and ZTE) to handle all voice and video service scenarios.

- **Network Migration Support:** This metric evaluates support for multiple migration paths to 5G while providing support for 4G/LTE and a level of legacy services. The metric evaluates support for NSA options (EPC with 5GC, 5G EPC with 5G NR) and the ability to migrate from NSA to SA. The metric also evaluates the tools, training and consulting services provided directly or through strategic partners. The emergence of pre-integrated/pre-tested solutions helps accelerate 5G adoption for private and smaller scale operators. Most vendors have effectively transitioned their installed bases and are rated as “Very Strong” for this update.

- **Automation:** The automation metric identifies the vendor’s overall methodology, VNF lifecycle management and automated operation and maintenance (OAM) capabilities. Operators have expressed their preference for open source-based solutions, which requires vendors to package and augment these capabilities with portals and application suites. Most vendors, are reporting significant investments and are ranked very strong” for this update, given their level of investment and progress since the last 5GC update.

- **Public Cloud Support:** This metric evaluates the solution’s ability to operate in a hybrid cloud deployment model and details the level of integration with key public cloud providers like AWS, Azure, Google Cloud, Alibaba, and others. Deployments leveraging public cloud services are ramping as operators offer and trial service options. For example, in North American and European markets, operators now offer various levels of cloud-based services to enterprise customers; however mobile core deployments in the public cloud are minimal, additional emphasis will be placed on this metric in subsequent assessments if the market materializes. Cloud providers (Google, Microsoft, Amazon) are investing heavily in telco cloud initiatives to enable core deployments within their edge PoPs, which if successful will compete with traditional operators.

## Vendor Recommendations

- **Cisco:** Cisco should highlight the ease with which its Ultra Packet Core (vEPC) customers can seamlessly add 5G functionality. Cisco should also highlight its RAN-agnostic support and contributions to Open vRAN-related solutions. Cisco expertise and leading position with enterprises should help telcos deliver high value B2B services to compete with OTT players.

- **Ericsson and Nokia:** Ericsson and Nokia should tout visibility 5G deployments with major tier 1 operators globally and with Chinese operators to demonstrate their ability to support mass scale 5G networks. Both should show their progress toward deploying live SA networks for greenfield operators and to support private networks (B2B) opportunities.

- **Huawei and ZTE:** Huawei and ZTE should highlight their Tier 1 operator deployments (in all three China-based operators and elsewhere), calling out strengths such their experience supporting massive scale and achieving high reliability. Huawei should highlight its 5G SA live network deployments, which it claims deliver 55% of current global 5G SA capacity, without any reported network outages. Both should highlight B2B solutions that deliver compelling enterprise and Industrial 4.0 services. ZTE should highlight its commercial engagements with operators to provide B2B and B2C services in multiple vertical markets.

## Buyer Recommendations

- **Evaluate Lifecycle Management and Pre-integrated Options:** The road to 5G will be a long one; operators should look for solutions that provide robust lifecycle management and service automation that enable incremental features and services to be designed, tested, deployed, and supported to reduce operational complexity (i.e., CI/CD). Tier 2/Tier 3 operators should also evaluate pre-integrated cloud-based solutions to help accelerate 5G service deployment.

- **Assess Converged 5G Core Benefits:** Consider the benefits of a 5G converged core implementation to simplify and speed up deployment. Considering that LTE services will generate the bulk of most operators’ revenues for the next five years, a common operational model established early can minimize the impacts of adding new services and devices.

- **Consider Support for Multiple Cloud Services:** Operators should consider 5GC vendor solutions capable of deploying a range of services over multiple private and public clouds to reduce time-to-market and expand their serving footprint. Cloud providers are investing heavily in telco cloud support to facilitate adoption. Operators should look for flexible cloud charging and performance models, to ensure placing workloads in the cloud are both economical and meet SLA expectations.

# Rated Competitors

<b>Product Name</b>	Cisco Ultra Cloud Core
<b>Current Perspective</b>	<p>Cisco's Ultra Cloud Core is very strong in the 5G mobile core market. Ultra Cloud Core provides a common execution environment for all 5G services and provides inter-working with Cisco's Ultra Packet Core for 4G and earlier mobile core generations. Cisco has garnered support for its RAN-agnostic stance, positioning it to capture mobile core deployments in multi-vendor environments. Cisco has elevated its position in Open RAN by forming the vRAN Ecosystem where it focuses on providing policy and control functions to emerging Open RAN vendors. Cisco also focuses on WiFi access and VoWiFi services.</p> <p>Cisco stresses support for advanced analytics and infrastructure health checks, simplified methods to introduce new 5G services, support for automated configuration changes and upgrades, automated deployment and testing as part of a CI/CD workflow. Cisco also offers its "Cloud Services Stack for Mobility" as a pre-integrated, pre-validated solution embedded with hardened security, automation, and assurance functions to reduce integration costs and overall networking complexity to help operators deliver innovative 4G / 5G mobility services</p>
<b>Buying Criteria Rating</b>	<ul style="list-style-type: none"> <li>• Solution Maturity: Strong</li> <li>• Architecture: Very Strong</li> <li>• Service Types: Very Strong</li> <li>• Performance: Very Strong</li> <li>• Multimedia: Strong</li> <li>• Migration: Very Strong</li> <li>• Automation: Very Strong</li> <li>• Cloud: Very Strong</li> </ul>
<b>Product Scores</b>	<b>Very Strong</b>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Supports major public cloud-based services; including AWS, Google Cloud, and Microsoft Azure; validated on VMware 6.5, OpenStack, and bare metal.</li> <li>• Maintains its leading enterprise presence and is well positioned to create Networking as a Service (NaaS) solutions for B2B2C services, a key CSP challenge.</li> <li>• Vector Packet Processing (VPP) delivers 400 Gbps of capacity per server without the need for hardware acceleration.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• End-to-end suppliers have captured early 5G momentum, leaving Cisco to cultivate a longer-term multi-vendor RAN-agnostic proposition for later uptake.</li> <li>• Lacks active participation in the massive 5G China market segment.</li> <li>• Will be challenged to establish its 5G SA core credentials as the Open RAN market matures, given moves by Microsoft, Google, Samsung, and others.</li> </ul>

<b>Product Name</b>	Ericsson Dual-mode Core
<b>Current Perspective</b>	<p>Ericsson's dual-mode core is very strong in the market, it combines EPC and 5G core functionality with a common cloud-native micro-service-based software platform to support both 5G SA and NSA models for all generations of mobile services. Ericsson's core solution is deployed alongside its RAN, mobile transport, and OSS/BSS products giving Ericsson the ability to provide an end-to-end mobile network solution.</p> <p>The solution demonstrates significant maturity as evidenced by its support for 64+ live NSA deployments, 8+ live SA deployments along with 150+ SA trials.</p> <p>Ericsson shows broad operator diversity with live deployments in major mobile operator networks in Europe, North American, Asia and China including: China Mobile (NSA/SA), China Telecom (NSA/SA), KDDI, Softbank, SKT, Telstra, BT, Vodafone, Telefonica, KPN, Rogers, Telus, Singtel (SA), and Vodafone Germany (SA).</p>
<b>Buying Criteria Rating</b>	<ul style="list-style-type: none"> <li>• Solution Maturity: Leader</li> <li>• Architecture: Leader</li> <li>• Service Types: Leader</li> <li>• Performance: Very Strong</li> <li>• Multimedia: Leader</li> <li>• Migration: Very Strong</li> <li>• Automation: Very Strong</li> </ul>

	• Cloud: Leader
<b>Product Scores</b>	<b>Very Strong</b>

<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Demonstrates maturity and experience with live 5G NSA and SA networks in major Tier 1 operators globally, including North America, Europe, and Asia.</li> <li>• Delivers the benefits of cloud-native microservices and a common service model to all generations of mobile services, with all 5G and EPC functions being implemented as micro-services.</li> <li>• Provides an end-to-end 5G network solution for CSPs (e.g., RAN – CORE – BSS/OSS) based on its Digital BSS portfolio.</li> <li>• Accelerates service deployment through automated network deployment and service creation software, and active deployment of its CI/CD pipeline.</li> <li>• Supports private and public cloud deployments with cloud-agnostic platform, noting Tier 1 operator deployments across major public cloud providers.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• IT vendors such as Netcracker and Amdocs with strong cloud-based technologies challenge Ericsson's dominance in the mobile network domain.</li> <li>• Could experience slower growth in network deployments in China, based on its home country's banning of gear from Chinese vendors.</li> <li>• Open RAN initiatives could weaken Ericsson's end-to-end value proposition, as interoperability, reliability and performance concerns are mitigated.</li> </ul>

<b>Product Name</b>	Huawei 5G Core
<b>Current Perspective</b>	<p>Huawei's core network solution contains all mobile infrastructure components and a broad array of network functions (NFs). The cloud-native and microservices architecture provides 99.999% reliability, noting zero operator service outages. The solution supports VMs, containers and bare metal deployments to address infrastructure requirements based on operator needs and preferences.</p> <p>Huawei has been instrumental in developing B2B solutions and reports that it has participated in 3,000+ B2B use cases (about 20% are commercialized, and 80% are in trials), applications include: VR/AR, manufacturing, smart port, and coal mining. Huawei supports ONAP's network automation - Agile &amp; Intelligent Design and Orchestration (AIDO) - and provides DevOps maintenance tools for planning, installation, integration, testing and fault correction, and automatic lifecycle management.</p> <p>Huawei has reported 115 live 5G core deployments (68 NSA and 18 SA), showing continued market momentum, and notes it is supporting 50+% of the global 5G (NSA + SA) capacity for 200 million users (derived from GSA 5G traffic reports).</p>
<b>Buying Criteria Rating</b>	<ul style="list-style-type: none"> <li>• Solution Maturity: Leader</li> <li>• Architecture: Leader</li> <li>• Service Types: Leader</li> <li>• Performance: Leader</li> <li>• Multimedia: Leader</li> <li>• Migration: Very Strong</li> <li>• Automation: Leader</li> <li>• Cloud: Very Strong</li> </ul>
<b>Product Scores</b>	<b>Leader</b>
<b>Strengths</b>	<ul style="list-style-type: none"> <li>• Demonstrates maturity based on claims of supporting 50+% of the global 5G (NSA + SA) capacity serving 200+ million users (vendor supplied, derived from GSA 5G traffic reports).</li> <li>• High reliability claiming zero reported network outages in telco networks running it 5G core.</li> <li>• Experienced at supporting mass scale mobile core deployments delivering high throughput, peak data rates and low latency at the application layer.</li> <li>• Supports emerging advanced calling services via its Single Voice Core (SVC), a key requirement for emerging Chinese 5G interactive voice and video services.</li> <li>• Provides end-to-end automation via iMaster MAE-CN, including a slice to support for B2B services.</li> </ul>

<p><b>Limitations</b></p>	<ul style="list-style-type: none"> <li>• Stance on Open RAN could be challenged if/when carrier-grade performance, interoperability, and reliability is proven.</li> <li>• Lacks access to certain western markets for 5G core networking technologies (U.S., others).</li> <li>• Competitors can challenge the need for a common voice core to support 2G/3G services beyond adopting the existing 3GPP standards, given a continued decline in legacy services.</li> <li>• Huawei touts a strong cloud-centric architecture but lacks the depth of public cloud deployments, outside of its own Huawei Cloud, compared to its Western competitors.</li> </ul>
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<p><b>Product Name</b></p>	<p>Nokia 5G Core</p>
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<p><b>Current Perspective</b></p>	<p>Nokia's 5G Core is very strong in the market. Its cloud-native core technology was first introduced to support 4G/LTE and expanded to support 3GPP Release 15/16 features. Nokia has been in pursuing private network opportunities through operators as well as direct to the enterprise, having made it a key strategic initiative.</p> <p>For private network and Tier 2/3 operators Nokia offers its off-the-shelf "Core Engineered Systems" to address 5G Core, 4G EPC, IMS/Voice, and subscriber data management functions that are pre-defined, pre-integrated and certified as ready to deploy. Nokia supports multiple access methods, which some competitors do not, including FA, WiFi, and CBRS (U.S). The 5GC is cloud agnostic and reports multiple public cloud-deployments.</p> <p>Nokia's solution supports device/service diversity, high throughput stringent latency control, and can offer an optimal server footprint for highly distributed multi-access edge computing (MEC) deployments.</p> <p>Nokia's notes 68 live deployments in NSA and five SA networks for operators, demonstrating strong market traction and commercial deployment.</p>
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<p><b>Buying Criteria Rating</b></p>	<ul style="list-style-type: none"> <li>• Solution Maturity: Very Strong</li> <li>• Architecture: Leader</li> <li>• Service Types: Leader</li> <li>• Performance: Leader</li> <li>• Multimedia: Leader</li> <li>• Migration: Very Strong</li> <li>• Automation: Very Strong</li> <li>• Cloud: Leader</li> </ul>
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<p><b>Product Scores</b></p>	<p><b>Very Strong</b></p>
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<p><b>Strengths</b></p>	<ul style="list-style-type: none"> <li>• Demonstrates maturity in 5G live deployments in major Tier 1 operators globally, including DISH Networks U.S. selection for its cloud-hosted 'greenfield' network.</li> <li>• Supports wireless and wireline access and integrated IP services such as DPI, firewall, and NAT technologies.</li> <li>• Delivers leading performance per server and peak per user rates via intelligent access multiplexing and in-line service chaining.</li> <li>• Provides end-to-end lifecycle management, via its Delivery Operations (DelOps) and AVA cognitive services platform, to reduce network complexity.</li> <li>• Leverages its class leading IMS core to deliver advanced multimedia services.</li> </ul>
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<p><b>Limitations</b></p>	<ul style="list-style-type: none"> <li>• Private network competition from emerging mobile core competitors, challenges one of its strategic initiatives.</li> <li>• Webscalars targeting telco cloud opportunities impacts Nokia's end-to-end orchestration and CI/CD proposition.</li> <li>• IT suppliers like Netcracker and Amdocs, have revved up their telco focused initiatives, which challenges Nokia's BSS role.</li> </ul>
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<p><b>Product Name</b></p>	<p>ZTE 5G Common Core</p>
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<p><b>Current Perspective</b></p>	<p>ZTE's 5G Common Core is based on its cloud-native SBA+ architecture and focuses on 5G NSA/SA commercial initiatives and mass scale deployments. ZTE promotes its converged core model, to support growing LTE and 5G NR, plus a converged voice core to support for all generations of mobile services (2G, 3G, 4G, and 5G). ZTE is a key innovator for "5G Calling" and "5G Messaging", which is being deployed in China for ultra-HD quality and immersion experience.</p> <p>ZTE collaborates with multiple vertical markets to facilitate B2B market adoption, and offers its compact i5GC (with R16 enhancements, edge, and cloud network convergence capability).</p> <p>ZTE supports public clouds such as AWS, Alibaba, and China Telecom's eCloud and reports operator traction for B2C and B2B markets, which demonstrates the diversity of its 5G core for telco and non-telco use cases.</p>
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<p><b>Buying Criteria Rating</b></p>	<ul style="list-style-type: none"> <li>• Solution Maturity: Very Strong</li> <li>• Architecture: Leader</li> <li>• Service Types: Leader</li> <li>• Performance: Very Strong</li> <li>• Multimedia: Leader</li> </ul>
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	<ul style="list-style-type: none"> <li>• Migration: Leader</li> <li>• Automation: Very Strong</li> <li>• Cloud: Very Strong</li> </ul>
<b>Product Scores</b>	<b>Very Strong</b>

<b>Strengths</b>	<ul style="list-style-type: none"> <li>• ZTE touts mobile core deployments in high scale networks, having been deployed in all three Tier 1 Chinese operators.</li> <li>• Supports all service types including FA and regional specific PWS and non-public networks.</li> <li>• Supports advanced "5G Calling" services via a common voice core for cellular services, driven by the Chinese market.</li> <li>• Provides end-to-end service automation, via its Automation Integration Center and big data platform for AI/ML training.</li> <li>• Reports significant traction and experience with operators supplying private network use cases to service the B2B and B2C markets.</li> </ul>
<b>Limitations</b>	<ul style="list-style-type: none"> <li>• ZTE lacks the depth of public cloud deployments, outside of AWS and China-based public cloud suppliers (eCloud), compared to its western competitors.</li> <li>• Barriers due to geopolitical issues impact ZTE's ability to penetrate certain major 5G markets (U.S., others).</li> <li>• Stance on Open RAN could be challenged if/when carrier-grade performance, interoperability, and reliability is proven.</li> </ul>