

KONTRON CARRIER-GRADE 5G SA CORE

USE CASE



ONE PLATFORM. ONE DATABASE. ONE USER PLANE. READY FOR 5G SA BUT HANDLE 4G.

Kontron's **Carrier-Grade 5G SA Core** is a cloud-native, dual-mode core platform that seamlessly integrates **4G EPC and 5G Core (Standalone)** capabilities into a single, unified system. Designed to support efficient network evolution, it enables operators to simplify operations, reduce costs, and accelerate the transition to 5G SA—while protecting existing 4G investments and ensuring standards-compliant performance.

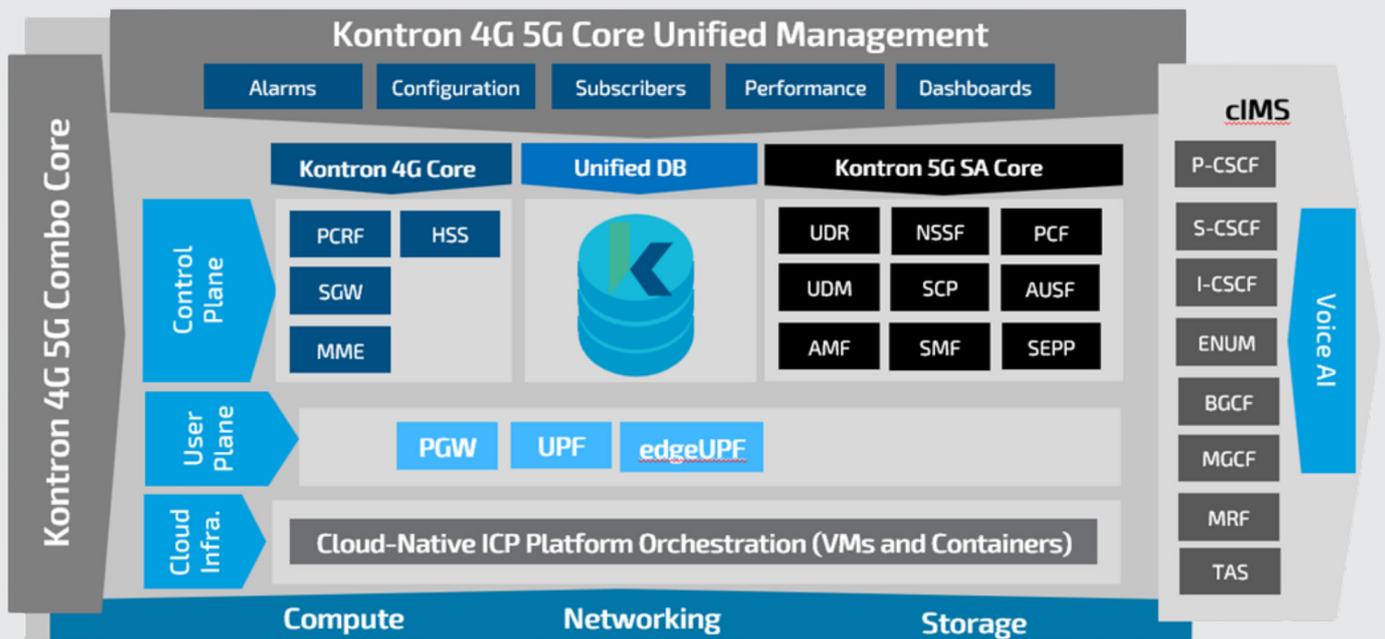
Key Capabilities

- **Dual-Mode Core Architecture** supporting both EPC (4G) and 5G Core (SA) on a single, unified platform.
- **Cloud-Native, Kubernetes-Based Design** for flexible deployment, elastic scaling, and automation.
- **Common Subscriber Database** across 4G and 5G, enabling seamless mobility and simplified subscriber management.
- **Unified User Plane** for efficient traffic handling, local breakout, and optimized performance.
- **Complete 5G Core Network Functions** combined with full 4G EPC elements, ensuring end-to-end standards compliance.
- **Reduced Complexity and Lower TCO** through consolidation, automation, and operational efficiency.
- **Future-Proof Architecture** enabling a smooth and controlled migration from 4G to 5G Standalone (SA).

TYPICAL USE CASES

Kontron's Carrier-Grade 5G SA Core addresses a wide range of operator scenarios, from cost-efficient deployments to full network modernization and service innovation.

- **Tier-2 & Tier-3 Mobile Operators and MVNOs**
 - Cost-efficient deployment of 4G and 5G services on a single platform
 - Faster service launch with reduced operational overhead
 - Simplified subscriber and policy management
- **National and Regional Telco Networks**
 - Consolidation of legacy EPC and 5G Core into a unified architecture
 - Optimized network operations through shared data and user plane functions
 - Scalable deployments for regional or nationwide coverage
- **Network Modernization & 5G Standalone Migration**
 - Gradual evolution from LTE to 5G SA without network duplication
 - Protection of existing investments while enabling next-generation services
 - Support for 4G today and full 5G SA tomorrow
- **Roaming, Local Breakout & Policy-Driven Services**
 - Efficient roaming support with unified subscriber management
 - Local breakout for latency-sensitive and edge-based services
 - Advanced policy control for differentiated enterprise and consumer offerings



WHY KONTRON?

Kontron delivers a carrier-grade, cloud-native connectivity platform combining 4G/5G Core, Cloud, and AI Voice capabilities, optimized for industrial-grade performance and low-power edge deployments. Built on deep expertise in embedded systems, telco software, and industrial computing, Kontron enables operators and enterprises to deploy secure, standards-based communication networks with seamless scalability from compact starter deployments to nationwide or full-campus coverage. With open integration and edge-ready architecture, Kontron supports Industry 4.0 transformation and mission-critical connectivity across public safety, transportation, utilities, and industrial environments.

