



Unlock flexibility
in D-RAN with
Ericsson RAN
Connect

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Distributed RAN (D-RAN) architectures are at the heart of modern mobile networks, supporting the rapid expansion of 5G and the integration of new spectrum and radio technologies.

As network complexity grows and user demands become more dynamic, communications service providers (CSPs) require solutions that deliver true flexibility and scalability—enabling them to adapt quickly, scale efficiently, and future-proof their investments. Ericsson RAN Connect is designed to meet these needs, empowering CSPs to build agile, high-performing D-RAN sites.

Meeting CSP needs in D-RAN deployments

Modern CSPs face a landscape defined by rapid change: new spectrum allocations, the rise of Massive MIMO, and unpredictable traffic patterns. In this environment, flexibility is not just a technical preference—it's a business imperative. D-RAN architectures must be able to adapt quickly, scale efficiently, and support seamless upgrades without costly overhauls or operational disruption.

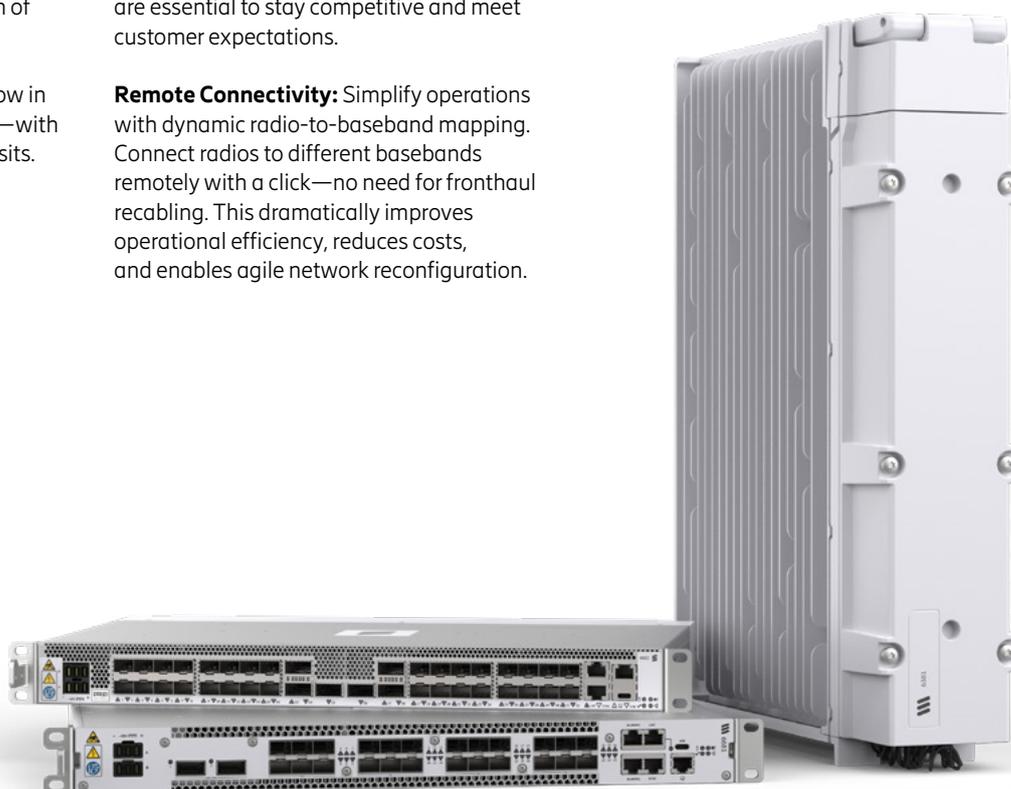
Key requirements include:

Adaptability: Infrastructure must support evolving radio technologies and spectrum bands, allowing for smooth integration of new capabilities.

Scalability: Sites should be able to grow in capacity—adding spectrum or radios—with minimal hardware changes and site visits.

Operational simplicity: Fast deployment, simplified expansion, and reduced OPEX are essential to stay competitive and meet customer expectations.

Remote Connectivity: Simplify operations with dynamic radio-to-baseband mapping. Connect radios to different basebands remotely with a click—no need for fronthaul recabling. This dramatically improves operational efficiency, reduces costs, and enables agile network reconfiguration.



Create site flexibility

Ericsson RAN Connect is engineered to address these needs head-on. By enabling true any-to-any connectivity between radios and RAN Compute or Cloud RAN NIC interfaces, RAN Connect removes the traditional limitations imposed by baseband port counts. This means CSPs can maximize their RAN Compute investments and respond dynamically to changing network demands.

How it works:

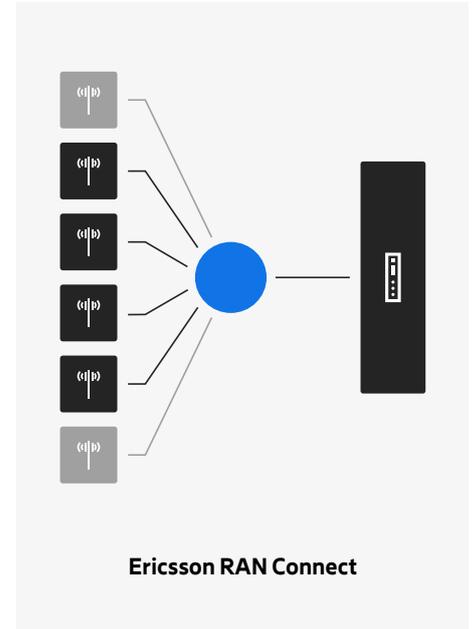
Port expansion: RAN Connect aggregates multiple radios—regardless of type or vendor—onto fewer, higher-capacity interfaces. For example, in a typical outdoor deployment, RAN Connect 6381 allows a site with 12 radios (Massive MIMO and remote) to be efficiently mapped onto a RAN Processor 6355 with only 9 available ports, unlocking full compute utilization.

Multiplexing gains: Aggregating radio traffic enables statistical multiplexing, reducing overall throughput toward the RAN Compute and optimizing bandwidth and fiber usage.

Remote rehoming: Radios can be reassigned to different compute nodes remotely, eliminating the need for on-site interventions and enabling rapid adaptation to shifting traffic or maintenance needs.

Intent-based configuration: Integration is streamlined with automated radio unit identification and intent-based configuration, reducing manual steps from dozens of commands to just one—saving time and minimizing errors.

Resilience and sync: Built-in high-performance synchronization ensures robust, resilient network operations, even if local GNSS (Global Navigation Satellite System) fails, and prevents drift and handover issues.



Benefits with Ericsson RAN Connect

Deploying Ericsson RAN Connect in D-RAN delivers tangible advantages and benefits:

Industry-leading synchronization and resilience

Featuring Ericsson's leading RAN Compute synchronization solution, Ericsson RAN Connect delivers superior noise filtering and up to 15 times (1-5 hours instead of 5-15 min) longer timing holdover for TDD radio equipment – giving you improved resilience and higher capacity gains.

Industry-leading energy efficiency

Ericsson RAN Connect delivers up to 75 percent proven energy savings in the field compared to other leading market alternatives. This is achieved through its advanced silicon, which also contributes to a more compact form factor and lower site footprint.

High capacity

Ericsson RAN Connect has the means to deliver the capacity required today and in the future for all site types and deployment scenarios. With a high density of high-capacity ports up to 400 GE and a switch fabric of 600 Gbps to 1.2 Tbps, our portfolio provides the scale and flexibility you need.

Remote reconfiguration and operational efficiency

Ericsson RAN Connect opens new possibilities for remote radio rehomeing and reconfiguration directly from the operations center, contributing to fewer site visits and significant cost savings across your operations.

Unified management and observability

Advanced automation and analytics tools are designed to extend your network's uptime, including functionalities such as AI/ML-powered network monitoring and predictive maintenance, real-time service assurance, and granular circuit telemetry monitoring. Unified operations simplify management for radio, transport, and IP domains, supporting a holistic approach to network evolution.

Ericsson Network Manager (ENM) supports efficient network roll-out with end-to-end management of all network technologies from radio to core via a single platform, covering monitoring, provisioning, software management, and deployment

Conclusion

Ericsson RAN Connect is a cornerstone for CSPs seeking to build agile, scalable, and future-ready D-RAN networks. By delivering unmatched flexibility, operational efficiency, and seamless integration with both existing and next-generation architectures, RAN Connect ensures that your network is ready for the next wave of mobile innovation, while keeping costs and complexity under control.

