

Accelleran Private 5G: An Open and Cloud Native RAN Architecture

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5G Private Networks: The immense benefits and capabilities

From retailers to manufacturers, enterprises today need to deliver real digital transformation, creating a network with high bandwidth and ultra-low latency. Private 5G networks open the door to real digital transformation and Industry 4.0 use cases.







Traditional Wi-Fi solutions can work with legacy equipment and applications, but have limited performance, coverage and security - areas where a Private 5G network triumphs.

Benefits of Private 5G

- **Enhanced speeds and bandwidth:** Private 5G provides significantly higher speeds over a Public 5G network, speeds required to enable advanced use cases such as AR, VR, drones, and remote maintenance applications.
- **Scalability:** A network privately managed by an enterprise can be scaled to suit the needs of your project, providing immense flexibility.
- **Robust Security:** The network is encrypted, and is deployed on the enterprise's premises and only allows connections for pre-authorised devices, vastly improving the security of the network. Data does not even have to leave the enterprise network.
- **Low Latencies:** Mission critical applications require ultra-low latencies, especially in more advanced use cases such as factory automation.

A Private 5G network allows your business to achieve total control of your business critical processes. The RAN control and intelligence tools provided by Accelleran enable a new wave of innovative use cases for your enterprise.

Private 5G: Transforming the enterprise landscape

-  **Manufacturing:** Automated Guided Vehicles, Manufacturing line automation, quality control
 -  **Healthcare:** Remote surgery, analytics, reliable communications
 -  **Transportation:** Real-time monitoring, smart stock control, passenger counts
 -  **Education:** Remote learning, AR/VR
- And many more...**

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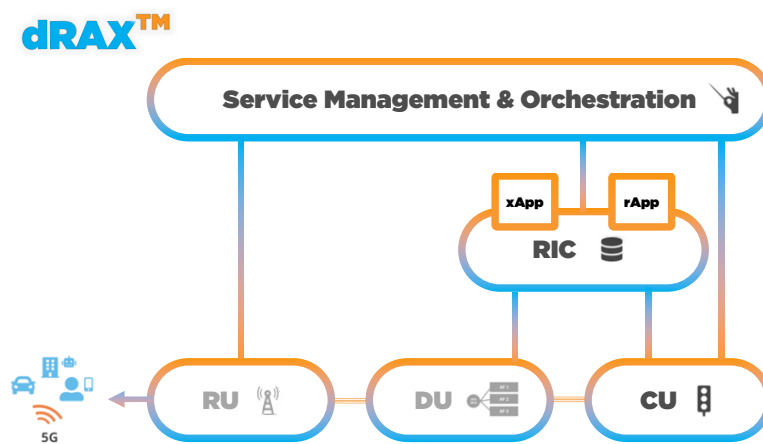


Accelleran dRAX™: A Turnkey Private 5G Solution

Digital transformation is no longer a question of if, but when. Many enterprises struggle with the complexity of network transformation, with so many vendors on the market offering different kinds of solutions. Selecting the right partner is critical, and it's not easy to decide which hardware and software is best suited for your business case

Our dRAX™ solution is as easy to install as WiFi, it leverages our ecosystem of partners to deliver a proven real-world deployment of a multi-vendor, disaggregated Open RAN. Accelleran's solution is genuinely cloud native, delivering a reliable and scalable Private 5G solution.

dRAX covers the key control and resource management functions of the RAN (SMO, RIC, CU) and is pre-integrated with a range of DU and RU solutions with different splits from our partners.



RAN Intelligent Controller (RIC), bringing intelligence and automation to the RAN

Accelleran's RIC was first released in 2019, with a rich partner ecosystem of developers creating an 'App store' of xApps and rApps that are bringing automation, intelligence and optimisation to the RAN. It is a truly cloud native RIC, enabling real-time control of network elements.

RIC Use cases:

Smart interference Management: Using AI algorithms to ensure improved performance by managing interference from cell edge users.

Smart Handover: Ensure your connected devices connect to the best possible cell, accounting for cell load and signal quality to maximise overall system throughput.

Energy efficiency Management: Automatic adjustment of cell transmission power based on use

And many more, including:

Anomaly detection | ANR | Automated PCI Allocation

Traffic Steering | Coverage and capacity optimisation | Mobility and robustness optimisation

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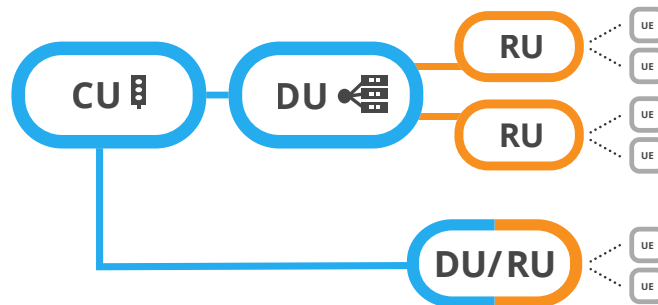
What does OpenRAN mean for Private 5G Networks?

The big picture

Competition is the driver of any industry. Having a space dominated by a handful of large players leads to stifled innovation, spiralling prices and as we have seen in recent years, complex supply chain issues.

Simplified, a RAN network connects user devices to a core network. It consists of a CU, DU and RU with different possible splits: Totally disaggregated CU, DU and RU or disaggregated CU with a combined DU/RU.

In the past, enterprises would be 'locked in' buying the hardware and software components for their Private 5G network from a single supplier.



Open RAN: Revolutionising the industry

By opening up the interfaces, private 5G networks can run off 'commercial off the shelf' (COTS) hardware in the cloud or on the edge of the network. Open RAN decouples the hardware and software components, enabling integration from various vendors, **this will see capital expenditure and operation costs fall as the multi-vendor environment thrives.**

In short, Open RAN:

- Reduces vendor lock-in
- Reduces vendor swap costs
- Accelerates innovation
- Enables new opportunities and decreases CAPEX and OPEX

Enterprises are increasingly using private networks to prove the viability of ORAN-based networks.

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Accelleran: Building an Open, Smart and genuinely Cloud Native future

Accelleran fully supports the development of the OpenRAN ecosystem that continues to enhance the customer experience and foster innovation throughout the telecommunications industry and beyond.

Accelleran is a member of:



To facilitate the collection of data from the RAN, Accelleran's RAN Intelligent Controller platform is aligned to the O-RAN Architecture and uses pre-standard or standard interfaces such as O1, E2, A1.

Why choose Accelleran?

The Accelleran team has decades of experience in the telecommunications industry. We stand ready to build private 5G cellular networks that bring intelligence, automation and an enhanced user experience. We continue to pioneer the software-driven approach to the RAN and our fully disaggregated RAN is made possible with a genuinely cloud-native architecture.

To find out more about, get in touch today and follow us on social media to keep up to date with the latest industry news.

Get in touch with Accelleran today



Accelleran

Accelleran has been a pioneer of Open Radio Access Networks since its foundation in 2013. The software-driven approach to RAN will bring immense benefits to the business landscape, enabling a multi-vendor RAN ecosystem that creates greater flexibility, efficiency and reduced costs for operators and private networks.

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