# Simple. Scalable. Secure.

## How private 5G is transforming modern connectivity.

## Keeping it simple

Private 5G networks are built with the same core technology public 5G networks use but are **deployed within a controlled environment.** They are dedicated and privately managed cellular networks **operating independently** of public infrastructure.

Mobile operators manage public 5G networks, while **private 5G is designed for exclusive use** by businesses and government organisations. They can operate indoors and outdoors, cover large areas, and offer enhanced security, control and customisation, making them ideal for industries with **specific connectivity needs**.

Many private 5G networks use **edge computing** to handle data processing closer to where the data is created, **reducing delays and improving real-time decision-making!**

## Empowering you to scale

There are several ways a private 5G network ensures they're able to scale as the needs of the business evolve:

- **Support for massive IoT deployments**
  Private 5G networks can **connect thousands of devices per square kilometre**, enabling smart factories, healthcare applications, and logistics management.

- **Customisation**
  You can design your network to be **optimised for what you need**, such as the Internet of Things (IoT), augmented reality (AR), or high-speed communication.

- **Greater reliability and coverage**
  Wi-Fi can struggle with interference and has limited range, whereas **private 5G can provide consistent coverage across larger areas**. Private 5G can be integrated alongside Wi-Fi to cover its weaknesses.

- **Radio Access Network (RAN)**
  Made up of 5G towers and radios, these **connect devices that would ordinarily be standalone**, like sensors, smartphones and IoT systems, to your network.

## Assuring your connection is secure

An array of security features allows private 5G networks to **provide a secure and reliable environment** for business applications and data:

### Privacy and ownership
Since private 5G networks operate independently, organisations have complete control over their data, reducing risks associated with cyber threats and breaches.
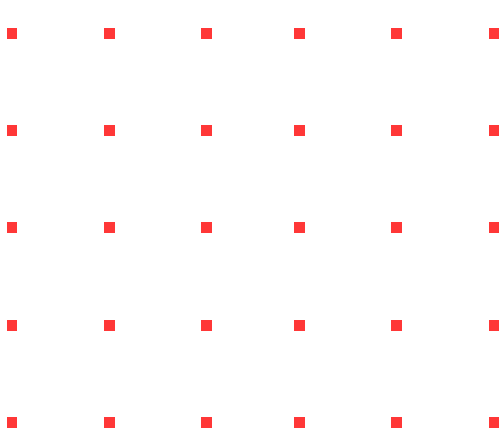
### Ultra-low latency
With latency as low as 1 millisecond, **data is transmitted almost instantaneously.** This is crucial for applications like autonomous vehicles, which require immediate responses for safety and reliability.

### Core Network
The private 5G core manages data routing, authentication, network slicing and Quality of Service (QoS). Collectively, **these actions enhance the overall security of your network.**

### Spectrum
Private 5G networks use **licensed private spectrum from Ofcom**, ensuring minimal interference from other wireless signals.
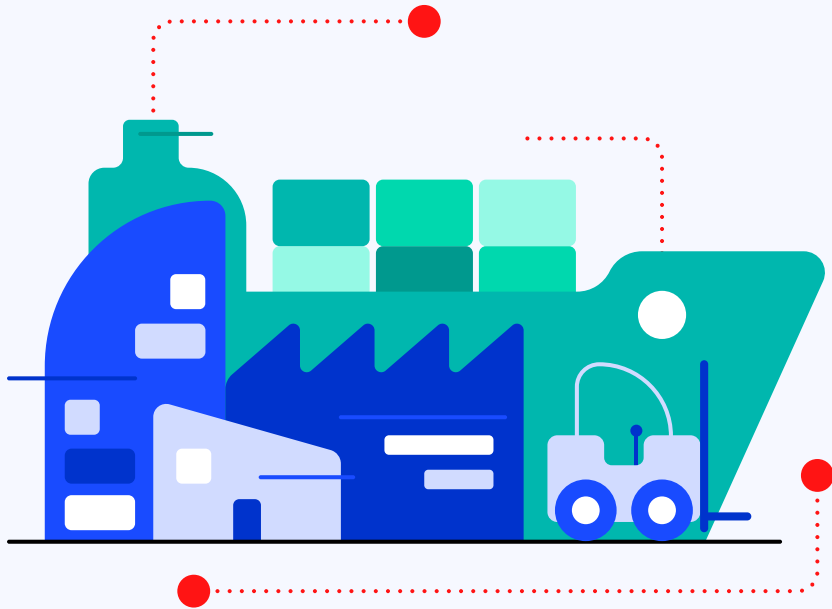
### Security and management
Private 5G networks include **robust security features** such as encryption, identity management and intrusion detection systems. They also have **network management tools** for monitoring and optimisation.

## Real-world application

### Industry 4.0
Private 5G enables real-time monitoring, predictive maintenance, and autonomous robotics in smart factories and vehicles. These technologies are used in the Manufacturing, Ports, and Transport sectors.

### Logistics and warhousing
Private 5G networks streamline supply chain operations with Automated Guided Vehicles (ACGs), smart tracking, and remote monitoring.

### Smart cities
Governments can use private 5G for intelligent traffic management, surveillance, and emergency response systems.
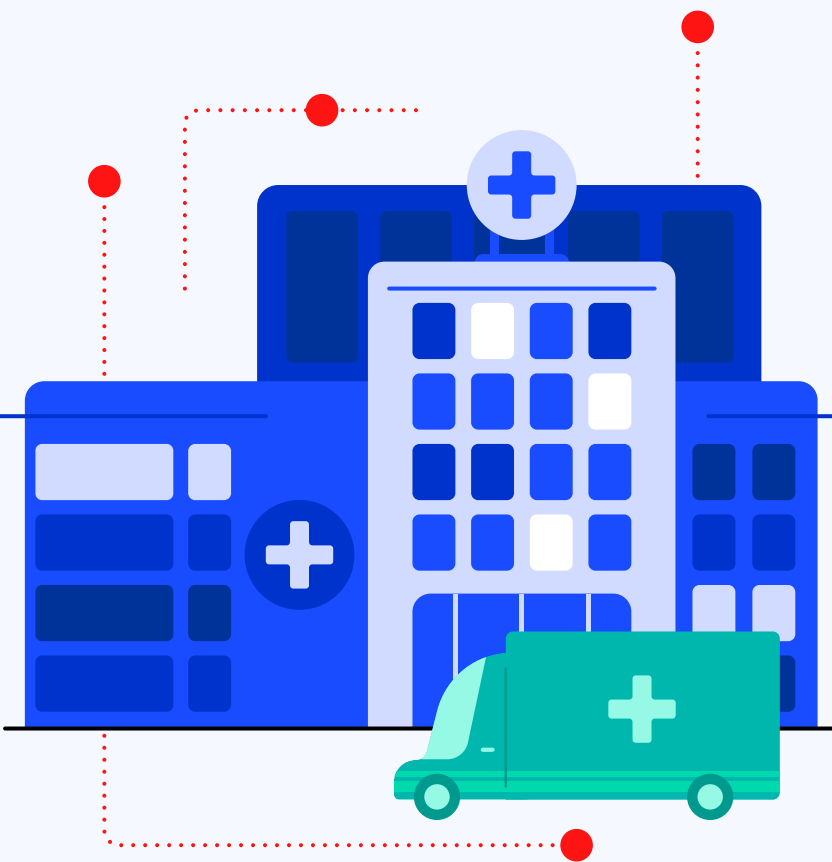
### Stadiums, media and entertainment
Enhance the experience of live events for attendees, staff, and local viewers.

**Cisco provided the Paris Olympics P5G network** for media use, allowing massive data transfers for ultra-high-definition video.

### Defence and public safety
Military bases and emergency responders benefit from secure, high-speed communication networks for mission-critical operations.

### Healthcare
Hospitals can deploy private 5G to support telemedicine, robotic surgeries, and secure patient data transmission with minimal latency.

## Connectivity for an evolving world!

**Speak with a Networking specialist** at Logicalis to deliver a **high performance private 5G network** that can ensure your connection is **simple**, with room to **scale**, and keeps it **secure**.

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