

Private LTE/5G as a Service

for Distribution & Logistics

Logicalis helps plan, integrate, and operate a full stack, subscription-based private LTE/5G network for increased productivity and efficiency gains, improved safety metrics, and real-time collaboration across operations.

The pandemic upended the global supply chain, a key challenge that lingers still. But there are other pressures on the transportation, distribution, warehouse, and logistics sectors, including: an uncertain economy and rising costs, ongoing security risks, labor shortages, employee safety and overall efficiency, and sustainability.

As environments become more device-dense and the dependency on automation increases so, too, does the demand for real-time, high-speed data. But how can you drive increased efficiency, safety, and security while reducing costs and ensuring sustainability when Wi-Fi connections are often spotty and unreliable?

Private 5G securely connects people, business-critical applications, and a large (and growing) number of devices on a secure and dedicated network for increased automation, streamlined processes and workflows, improved productivity and safety, better asset and inventory management, greater cost efficiencies, and increased security. Plus, private 5G can better connect and power emerging technologies, such as autonomous vehicles, drones, AR/VR, robotics, and more.



How private wireless networks enhance connectivity in transportation and logistics

For warehouse, distribution, transportation, and logistics operations, private wireless networks offer significant advantages over Wi-Fi. These environments typically use WLAN and have multiple applications within a wide area deployed. But with Wi-Fi and public networks, it's nearly impossible to run cabling across the warehouse and outdoors or connect every device without having spotty connections or reliability, security, bandwidth, and availability issues.

With Wi-Fi and private 5G working together to blanket operations at the edge, you'll ensure secure and reliable connections for people, devices, and applications. Network slicing enables you to provision dedicated network resources by functional area, ensuring the highest operational connectivity. Workers can travel from the warehouse to the dock to the parking lot and yet be unaware of network handoffs occurring in the background as they move between the wireless infrastructure and the cellular infrastructure.

As one of two global partners authorized to deliver private 5G as a service, Logicalis is expert at integrating 5G with Cisco networking and security technologies at the core and delivering it as a service. Reduce technical, financial, and operational risks associated with managing your own network and refocus your resources on innovating for your core business.

Logicalis: Enabling massive productivity

efficiency gains

We guide you through all the details, starting with a complete assessment and site survey. But instead of introducing completely new technology, Logicalis has already worked out the deployment kinks to give you a clean integration with the Cisco network environment you already know. The result is that private 5G, Wi-Fi 6 and Wi-Fi 6E, and ultra-reliable wireless backhaul work together for unified IoT device management and IoT rigidized environments, keeping teams from having to learn and operate complex carrier-class private licensed radio networks.

In addition, Logicalis provides unified security identification and policy management across all wireless networks, supporting your business and enabling you to tackle the future with confidence. Experience carrier grade availability and reliability that securely supports the most demanding applications with 24/7 global support.

The result? Massive gains in productivity and efficiency, improved safety metrics, and real-time collaboration across operations.



Here are just a few use cases for the transportation, distribution, logistics, and warehouse sectors:

Use case #1:

Security here, there, and all the way out to the edge

Thanks, in part, to our growing reliance on global supply chains, transportation, distribution, and logistics companies are on the radar of malicious actors who want to disrupt business operations and steal financial data. Securing these networks requires security posture visibility, zero trust, and remote access.

Unlike public 5G, private 5G provides a closed network that ensures secure, reliable communication between people, devices, and applications. Data never leaves your network, ensuring that sensitive data can be transmitted securely.

Logicalis helps you minimize network vulnerabilities and harden your security posture by developing secure backups and disaster recovery plans, integrate existing cybersecurity solutions or investing in more robust solutions, applying regular security patches, and ensuring workers understand best security practices.

Use case #2:

Asset tracking and inventory management for improved efficiency and productivity

Today's warehouses, distribution centers, and logistics operations typically receive and store goods. Thousands of sensors track the locations of these goods from the truck to the dock to the warehouse, enabling workers to use handheld devices to quickly pick, pull, and ship whatever's needed to the point of sale or another warehouse. Using connected devices to track goods throughout their journey ensures not only supply chain resiliency, but also allows workers to be more productive.

Using real-time communication between people and devices delivered via private LTE/5G networks, organizations can quickly respond to changes in demand. With better inventory management, you can ensure just-in-time deliveries of goods and materials and reduce delays and errors.

Logicalis helps you build an ultra-low latency private 5G network that provides highly accurate location services, enabling you to track the movement of goods via handheld devices, motorized carts, and more. With this ultra-low latency network, operations can run 24/7 with minimal downtime, improving supply chain efficiency and resiliency and driving higher margins with improved loss prevention.



Use case #3:

Clear the path for automated guided vehicles and automated mobile robots

Many of today's warehouses and distribution centers already use automated guided vehicles (AGVs) and automated mobile robots (AMRs) to pick and pull goods. AGVs follow a predetermined path using cameras, radio waves, or lasers and stop when faced with an obstacle. These paths are typically wired, making updates and additions costly. AMRs, on the other hand, rely on software to map out the most efficient route and can quickly go around obstacles. Because they can be easily redeployed to meet changes in distribution lines, they're essential for agile logistics and transport.

The true value of AGVs and AMRs comes when they are all connected and collecting data that's integrated into distribution and logistics systems for the utmost in efficiency and productivity. While this is now typically done using Wi-Fi, Wi-Fi often cannot overcome the interference that comes from having a device-dense IoT environment.

The low latency and high bandwidth afforded by private LTE/5G networks enables organizations to use AGVs and AMRs to automate the movement of goods and materials around warehouses, distribution centers, and transportation hubs. Private 5G not only provides a better response time, a more stable connection, and more precise geo-positioning than Wi-Fi, it delivers ultra-reliable low latency communications (URLLC). URLLC provides up to 99.999% reliability and 1 ms latency—essential for automation and process improvements needed to ensure uptime and worker safety.

Private LTE/5G networks, offered by Logicalis, enable connections between people, processes, apps, and business-critical devices at the edge real-time seamless mobility and connected operations. And when delivered as a service, these private LTE/5G networks enable you to increase operational efficiency while maintaining control over your environment.





Use case #4:

Streamline and automate workflows with Connected Workers

Imagine equipping workers with voice-controlled headsets or hard hats outfitted with cameras, displays, microphones, and leading apps, enabling them to collaborate hands-free with anyone in the world and act as their counterparts' eyes and ears. Logicalis can help you integrate these specialized AR/VR tools and apps into your private 5G environment, providing the bandwidth needed to increase worker productivity and safety, minimize errors, and realize efficiency gains.

For example, a forklift goes down or requires maintenance, and time is money. With a few simple voice commands, workers can access equipment manuals, call on experts, take pictures, see demos, follow workflows, complete documents, and successfully make repairs from half a world away.

Benefits



Lower costs

Reduce the high cost of individual monthly cellular subscriptions through your telecom provider, while enabling much more reliable service.



Improved reliability

Enjoy more reliable 4G and 5G connections that improve warehouse operations with cloud-based configuration and monitoring services across all devices.



Data security

Manage and secure your data locally with local connectivity—data never leaves your network.



Greater simplicity and control

Retain security and control with complete SIM management and greater operational simplicity with service and device visibility by integrating with your Cisco infrastructure.



Better investment protection

Integrate with your existing Cisco infrastructure and get seamless software and firmware upgrades to eliminate obsolescence and maximize investment protection.

Why Logicalis



Deep connectivity expertise

Logicalis has over 20 active field trials featuring considerable expertise in Evolved Packet Core design and carrier deployment.



Award-winning global services

Logicalis delivers a consistent customer experience with the same services delivered, no matter where you're located.



Expansive ecosystem development

Logicalis has teamed with industry-leading Radio Access Network (RAN), Evolved Packet Core, and User Equipment providers, as well as numerous global providers who can deploy macro-cell (towers) both indoors and outdoors.



Hefty 5G experience

Through our acquisition of Siticom and its 100+ advanced 5G employees, Logicalis has carrier industry veterans with Private 4G/5G deployment experience and deep knowledge of Evolved Packet Core to provide a more holistic solution offering.



Unique Cisco partnership

As one of just six Cisco Global Gold partners—and one of two authorized to provide private 5G as a service, as well as private 4G—Logicalis has deep Cisco expertise and support.

Technologies

Includes Cisco's full-stack, subscription-based Private LTE/5G solution at the core, along with a Cisco-certified RAN.

Logicalis Professional Services

Provides site evaluation, engineering, and implementation, including site preparation, ordering, organization of the spectrum, SIM management, staging, profile creation, core and RAN installation, core NF configuration, and pre-launch solution validation.

Logicalis Managed Services

Provides ongoing support, including SLA management, 24/7 Logicalis Level 1 support and Level 2 and 3 triage and coordination with Cisco, RMA management, solution optimization, application and device integration, customer care and service, spectrum application, end customer service portal, and transport network managed service.

Case in point

Customer:
Major lumber supplier

Challenge: As lumber prices increased, so did theft, and they needed a way to better track their inventory.

Solution: Logicalis Private 5G Network as a Service

Results: With an ERP system and handheld devices integrated into their Cisco network, the supplier can now scan and track incoming/outgoing shipments, enabling them to know exactly what they have and where it's located and drastically improving loss prevention.