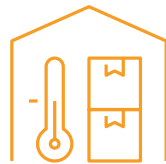


CONDIGEL RELIES ON RUCKUS® WI-FI TO POWER COLD CHAIN CONNECTIVITY AND OPERATIONAL EXCELLENCE



Reliable Wireless Powers Logistics Precision in Extreme Cold Warehouses
 from -20°C to -50°C



**GROUPE
 CONDIGEL**
 YOUR FOOD LOGISTICS EXPERT
EFBS | PACKGEL | MAEX

Customer
 CONDIGEL Group

Location
 France

For over 50 years, the CONDIGEL Group has been a leader in temperature-controlled food logistics, offering a full range of essential services, including handling, storage, quality approval, processing, packaging, and road transport.

As experts in contract production and B2B food distribution, CONDIGEL is committed to developing more responsible and efficient logistics solutions. Their approach is rooted in food safety, ensuring that every product manufactured, stored, and delivered meets the highest quality standards. Through stringent processes, the company actively prevent food risks and strengthen its quality culture, contributing to the marketing of safe and healthy products for consumers.

CONDIGEL's operations are supported by a strategically positioned infrastructure and a dedicated workforce of 280 employees, ensuring optimal logistics performance. The company manages nine warehouses—eight in Le Havre (seven for frozen goods and one for fresh products) and one frozen warehouse in Argentan. In addition, its facilities in Le Havre include two production workshops, three administrative centers, and a maintenance facility, reinforcing its role as a key regional logistics and production hub.

CONDIGEL group operates under five fundamental pillars: Customer satisfaction, committed as a local player, Quality working conditions, Profitability and Environmental impact.

Requirements

- Secure the critical operations
- Reduce network downtime
- Improve coverage and responsiveness
- Redundancy
- Centralized management
- Scalability

Solution

RUCKUS® access points (APs):

- Indoor:
 - R550
 - R510
 - R350
 - R310
- Outdoor:
 - T350
 - T350 SE
- RUCKUS Virtual SmartZone™ (SVz-E) Controller

Benefits

- Stable and efficient level of service
- Productivity warehouse enhancement
- Better coverage
- Easy and unified network management
- Cost-effective solution
- Future-ready technology

Resilient Wi-Fi Where It Matters Most

Wi-Fi connectivity plays a vital role across CONDIGEL's operations—from administrative centers requiring secure access and guest connectivity via RUCKUS captive portal, to some of the most demanding environments imaginable: temperature-controlled warehouses ranging from -20°C to -50°C. In these extreme conditions, reliable wireless communication is critical to provide the traceability of goods and smooth coordination of logistics workflows.

WiFi connectivity supports radio terminals used by both pedestrian employees and those operating carts. It also enables PCs to efficiently control and manage inbound and outbound merchandise. The same wireless infrastructure is leveraged by quality control teams to maintain seamless operations across all logistics processes.

Recognizing the strategic importance of always-on connectivity, CONDIGEL sought a solution to maintain seamless communication between mobile terminals and information systems, particularly in its cold storage facilities. Previous solutions faced significant challenges with coverage within the warehouses, leading to reduced productivity, product losses, and inventory omissions. Additionally, there were security concerns related to the SSIDs in use, which compromised network integrity and operational safety.

"We were losing nearly an hour of productivity every single day—an amount that quickly adds up. On top of that, stock inaccuracies and misplaced products created major headaches for our forklift operators trying to locate inventory. The cost of these issues caused by an unreliable Wi-Fi connectivity amounted to around €30,000 annually."

Thomas Fageol

CONDIGEL Group Deputy Chief Information Officer

When evaluating options, CONDIGEL continued relying on RUCKUS network infrastructure to solve a unique set of challenges. Key requirements included resistance to extreme cold, stable coverage through dense metallic infrastructure, high redundancy (enabling continued operations with 50% of terminals offline), and centralized management for charging stations. RUCKUS delivered on these needs, providing a network backbone that supports business-critical functions and enables CONDIGEL to scale its logistics capabilities with confidence.

RUCKUS Enterprise-Grade Wireless for Cold Chain Operations

The key requirement was for RUCKUS products capable of reliable operation in refrigerated environments, with temperatures as low as -20°C and even down to -40°C.

To meet the demanding connectivity needs of its logistics and administrative environments, CONDIGEL implemented a RUCKUS Wi-Fi infrastructure centered on RUCKUS Virtual SmartZone controller for centralized, scalable and unified network management.

The network infrastructure deployment includes a diverse portfolio of 145 indoor and outdoor RUCKUS® access points—R550, R510, T350, T350 SE, R350, and R310—which have been strategically selected to address varying coverage and environmental challenges across the facility.

RUCKUS was selected for its innovative BeamFlex® adaptive antenna technology, which is integrated into every RUCKUS smart Wi-Fi access point. This technology dynamically optimizes RF performance and mitigates interference, ensuring consistent signal integrity—even in highly reflective, metal-heavy warehouse environments. As the industry's most advanced smart antenna system, it features adaptive technology and a sophisticated quality of service (QoS) engine that extends coverage and capacity while intelligently adapting to environmental changes.

The ruggedized APs operate reliably in extreme cold and humidity, withstanding temperatures as low as -50°C without performance degradation.



The solution's architecture supports redundancy protocols that allow continued operation in degraded mode with up to 50% of terminal devices offline, ensuring business continuity.

In addition, the integration of a custom captive portal and advanced user policy management enhances security and guest access.

The system is designed to scale as CONDIGEL's operational footprint grows, maintaining unified visibility and control across all sites.

"We were already familiar with the RUCKUS brand, which we had used before, and we were satisfied with its performance, even on older models. This naturally led us to this solution for a complete renewal. The quality/price ratio, the reliability of the equipment, the radio performance in complex environments, as well as the centralized management via Virtual SmartZone, confirmed our choice. The technical support and expertise of the FrameIP Partner was also a determining factor."

Thomas Fageol

CONDIGEL Group Deputy Chief Information Officer

Network performance aligned with operational demands

During the selection process, CONDIGEL prioritized connectivity solutions that could deliver consistent performance in a complex logistics environment. RUCKUS stood out for its exceptional connection stability, ensuring uninterrupted communication across terminals, even in high-density or extreme-temperature conditions.

The impressive terminal range provided expansive, reliable coverage throughout large warehouses and cold storage zones, minimizing dead zones and communication dropouts.

Centralized network visibility via RUCKUS SmartZone controller significantly improved the ease of supervision, streamlining infrastructure oversight and troubleshooting. Most importantly, the RUCKUS solution aligned seamlessly with CONDIGEL's business constraints, combining technical robustness with operational flexibility—a decisive factor in choosing RUCKUS as the backbone of its wireless infrastructure.

“RUCKUS solutions have proven to be an excellent fit for our industrial needs, providing a stable and efficient level of service that ensures the security of our critical operations.”

Strategic Outcomes of Enhanced Wireless Connectivity

Following the deployment of the RUCKUS wireless solution, the organization has seen measurable improvements across multiple operational dimensions. Most notably, the number of network-related IT support tickets has been reduced by 50%, significantly easing the burden on IT teams and minimizing disruptions to critical operations.

Operational efficiency has also improved, with a marked reduction in order errors and product losses. This has translated into increased productivity across warehousing and logistics workflows. Enhanced data accuracy has played a key role in this transformation, with fewer lost pallets and improved visibility into inventory levels, production tracking, and shipping information.

Perhaps most impactful has been the near elimination of network-related downtime. Previously, some areas experienced up to an hour of disconnection per day, halting production entirely. Today, downtime is virtually nonexistent, ensuring continuous operations and greater reliability.

While the adoption of technologies such as mobile scanners and IoT sensors was not directly influenced due to device-specific limitations, the robust Wi-Fi infrastructure has laid the groundwork for future integration and scalability.

Finally, the organization has realized substantial cost savings through reduced product losses, fewer disputes, and lower maintenance costs underscoring the long-term value of the RUCKUS solutions deployment.

Best Practices from CONDIGEL's RUCKUS Deployment: Key Insights for a Resilient Network

CONDIGEL's successful implementation of RUCKUS solutions highlights several crucial lessons for deploying high-performance wireless infrastructure in challenging environments.

First, it's essential to conduct a thorough audit to map out all critical areas, ensuring optimal placement of access points for uninterrupted coverage. Redundancy should also be built into the design from the start, enabling continued operation even in the event of device failure or network degradation.

Another key factor in CONDIGEL's successful deployment was the partnership with FrameIP, an experienced integration partner who provided end-to-end support, from the initial site audit and technical recommendations to wiring, installation, commissioning, and training. Their technical expertise proved invaluable in navigating the environmental and logistical complexities of the Project.

Finally, the project team emphasized the importance of accounting for physical constraints such as extreme humidity and sub-zero temperatures which can significantly impact cabling, enclosures, and long-term equipment performance.

These strategic decisions contributed to a network that is not only reliable but also future-ready perfectly aligned with CONDIGEL's operational demands.



FrameIP (Member of the RUCKUS BIG DOGS Partner Program).

Created in 2007 by Sébastien Fontaine, FrameIP is the result of expertise acquired over many years with major public and private accounts.

Coming from the world of operators, the company vocation is to provide customers with the benefit of their feedback and advice with the aim of building customers infrastructures and solutions of tomorrow.

Network, security, communication and IT strategic management : FrameIP supports its clients from the design to the implementation of their high added value projects.

frameip.fr



RUCKUS Networks. RUCKUS Networks designs and builds truly purpose-driven network infrastructure that meets the strictest requirements of all kinds of enterprise environments. Together with our dedicated go-to-market partners, we enable customers to deliver exceptional network experiences, making RUCKUS Networks one of the most trusted brands in the business—a loyal companion ready to help get the job done, whatever it takes. RUCKUS Networks is backed by the corporate resources of CommScope, which powers many of the world's most advanced networks.

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CS-120425.1-EN (04/26)

