

Rittal – The System.

Faster – better – everywhere.

Revolutionizing a Leading Mobile Carrier's Research Facility

CASE STUDY
Telecommunications



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THE PROJECT

„The customer wanted to maximize installation flexibility and include the maximum number of TS IT enclosures in very limited spaces,” said Herb Villa, Senior Solution Sales Architect at Rittal. “Secondly, they required product reliability and accurate monitoring of critical system components. Anything less than 100 percent system availability was unacceptable.”

Herb Villa,
Senior Solution Sales Architect at Rittal

The challenge

- Limited space for diverse installation environments
- Need for maximum system reliability and uptime
- Requirement for real-time monitoring and quick response to issues

The solution

- Modular TS IT enclosures customized for various spaces
- Blue e+ air conditioning units for efficient climate control
- CMC III Monitoring for real-time system management and resilience



Introduction

Mobile carriers are the backbone of modern communication with networks enabling everything from personal connectivity to critical business operations. As the demand for faster, more efficient communication grows, mobile carriers must continually innovate to stay ahead. This is where research and testing facilities play an important role as they allow carriers to develop and perfect new technologies before they reach the market. For these facilities to be effective, they must be equipped with versatile and adaptable IT infrastructure to accommodate the rapid pace of technological change. System flexibility is also key to ensuring that new developments can be integrated into existing setups.

The Challenge

A top-tier U.S. telecommunications company was rapidly expanding its user base and nearing 6 million subscribers. To continue innovating while remaining reliable, the company needed to build a cutting-edge research and testing facility for the next generation of mobile communications. However, the facility required enclosures to be installed in various spaces, from large test rooms to smaller labs and multipurpose areas.

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The Rittal Solution

To meet the mobile carrier’s requirements, Rittal designed a comprehensive solution that incorporated several key components. Central to the solution were Rittal’s fully integrated TS IT modular enclosures, which were customized to fit the various installation spaces within the research and testing facility. These enclosures came preassembled in different dimensions, complete with LED lighting, cable and air-flow management components, and related accessories to ensure optimal performance and ease of installation.

Rittal also integrated its Blue e+ ultra-efficient air conditioning units to provide reliable climate control, offering up to 75% energy savings thanks to hybrid cooling technology. This is essential for protecting sensitive equipment from environmental factors and overheating.

To ensure the highest level of system monitoring and reliability, Rittal included the CMC III Monitoring solution, which acts as the „brains“ of the installation. This system offers real-time monitoring of critical climate control and environmental parameters, enabling immediate response to any component failures or alarm conditions. The source of the failure can be remotely identified via the CMC web portal.

Additionally, the solution featured auto-door opening kits and secondary exhaust fans in the core network communication areas to enhance system reliability and resilience. For the lab and test areas, Rittal incorporated EC fans and controllers to provide additional heat removal and climate control during extended component testing. This robust and adaptable setup allowed the customer to meet their immediate needs while also offering the flexibility to support future technological advancements.

The Results

The implementation of Rittal's modular enclosures, advanced climate control, and CMC III Monitoring technologies provided the mobile carrier with a highly dependable and efficient infrastructure that perfectly fit the customer's lab and multi-use spaces. The customized TS IT enclosures offered flexibility and scalability, while the Blue e+ units and monitoring systems maintained optimal conditions and allowed real-time tracking of critical components, ensuring system resilience, minimal downtime, and continuous operation.

"System reliability, installation flexibility, and component adaptability were all mandates to support the initial installation and future demands," explained Villa. "The enclosures installed in the lab spaces can be easily modified to support the next generation of communications systems. Those placed in core communications spaces produce a stable and secure installation designed to maximize the system availability."

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Conclusion

Faced with the challenge of scaling production to meet rapidly increasing demand, the customer gained valuable automation solutions from Rittal and Eplan that brought excellent ROI to their business with increased production rates and streamlined operations from engineering through to project completion. These improvements not only helped them overcome their immediate production challenges but also positioned them to better serve the diverse industries that rely on their pumps—from municipal water systems to industrial processes. The manufacturer is now well-equipped to continue growing and delivering reliable, efficient pumping solutions to meet demanding requirements for several applications.

Contact Rittal for Future-Proof Telecommunications IT Infrastructure

If your telecommunications operations demand top-tier reliability, flexibility, and scalability, Rittal's experts are ready to help. Our solutions are designed to meet the stringent requirements of the industry so your critical components are supported into the future. Contact Rittal today to discover how we can partner with you to create an innovative, future-focused solution tailored to your specific application.

About Rittal LLC

Rittal LLC is a global manufacturer of industrial and IT enclosures, racks, and accessories, including cooling solutions and power management systems for industrial, data center, outdoor, and hybrid applications. As the largest manufacturer of enclosures in the world, Rittal provides innovative, high-quality solutions for practically any industrial or IT infrastructure application, from single enclosures to comprehensive, mission critical systems. Products are tested and certified to the appropriate standards that apply, including UL, CSA, ATEX, NEMA, and more. [Learn more at rittal.us](https://www.rittal.us).

You can find the contact details of all Rittal companies throughout the world here.



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