





# INTRODUCTION

With research facilities and offices spread across multiple regions, the customer required a standardized, repeatable, and globally available solution to manage their IT infrastructure without the need for a dedicated server room. The solution needed to provide flexibility and security regardless of the location while providing a secure, cool environment to keep the IT equipment safe and maintain maximum availability with limited local IT support.

# THE CHALLENGE

The primary challenge for our customer was clear - the need for a secure IT infrastructure solution, a Micro Data Center (MDC) designed for multiple edge deployments. With several remote office locations and research facilities, they required a system that could be consistently deployed across various sites and environments. Some key considerations for the project included support for IT server and network components and the associated cable installation densities to accommodate up to 150 stations, the highest level of remote access control and component monitoring, efficient climate control, and self-contained fire suppression.



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# WHY RITTAL?

Rittal was a natural choice for this project thanks to highly available, standardized MDC solutions that can be quickly deployed in edge applications around the world. The customer was concerned about finding an MDC that could be easily duplicated without any requirement for modification or major adjustment. With Rittal's extensive product portfolio, high-quality solutions, global support, and in-stock systems available, the choice to move forward was a simple one.

# THE RITTAL SOLUTION

To meet the customer's requirements, Rittal provided a Micro Data Center (MDC) solution based on the robust TS IT enclosure platform measuring 32"(w) x 40"(d) x 80"-42RU(h). The front viewing door combined with a solid rear door ensured secure and easy access. An additional configuration using a 48" tall MDC was designed for customer locations to support fewer end users.

To support their IT operations, the system was designed to accommodate multi-port switches, end-user patch panels, and limited rack-mount servers and storage. The system was equipped with 19" rails on the front and rear, offering a full range of depth travel. To maintain optimal climate control within the enclosure, a 2.6kW Blue e+ wall mount air conditioning unit was installed, which ensures compliance with IP55/NEMA 12 standards and permits safe operation in environments with dust or water present. The Blue e+ is also the most energy efficient enclosure cooling solution on the market, offers up to 75% more efficient operation than conventional cooling systems, and can reduce carbon footprint by 25-50%. For the 24RU/48" tall systems, a 1.6kW capacity Blue e+ AC was included, which offered the same energy efficiency gains.

CLIMATE CONTROL

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# THE RITTAL SOLUTION (CONTINUED)

Organization and accessibility were maintained for proper cable management. To provide continuous power and distribution, a 3kVA Uninterruptible Power Supply (UPS) and Power Distribution Unit (PDU) were installed, balancing the AC capacity.

Security was a top priority, and the system was enhanced with electronic access control, along with security cameras. Environmental monitoring capabilities were also added, including temperature, humidity, smoke, and leak detection to ensure a safe and controlled environment. In Rack Fire Suppression (DET AC) was also incorporated within the enclosure.

- 1. TS IT Enclosure
- 2. 2.6kW Blue e+ cooling unit
- 3. CMC III Monitoring and Access Control
- 4. Managed PDU
- 5. Rackmount UPS
- 6. DET AC Fire Suppression

# **MEASURABLE RESULTS**

The implementation of the Micro Data Center (MDC) solution based on Rittal's TS IT enclosure has yielded excellent results for the customer. By providing a standardized, flexible, and secure system, they now have a repeatable configuration that allows them to efficiently deploy the solution globally across office buildings and facilities. With the complete MDC solution, including, a robust climate control system, fire suppression, extensive cable management, security cameras, access control, and remote environmental monitoring, the customer can rely on a secure and organized IT infrastructure.



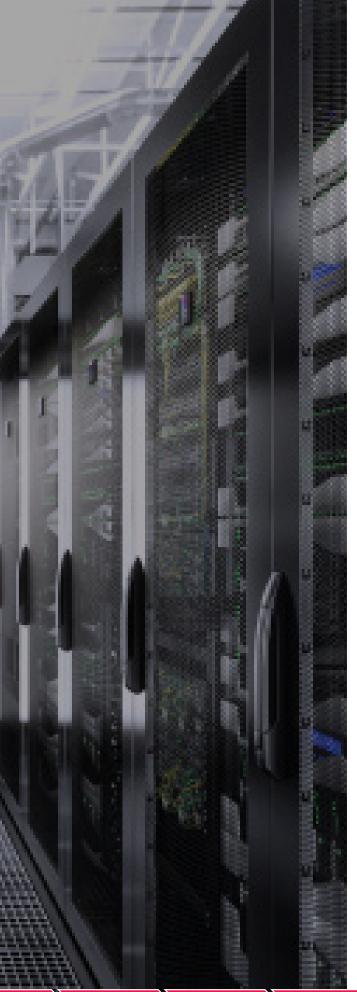
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# CONCLUSION

With Rittal's Micro Data Center (MDC) solution, based on the TS IT enclosure platform, the end user now has optimal operational efficiency, flexibility, and security for their IT operations around the world. With the capability for global deployment, repeatable system configuration, and compliance with the highest standards of environmental monitoring, the solution offers a competitive edge in a demanding industry.

# **CONTACT RITTAL TODAY FOR YOUR IT INFRASTRUCTURE OR EDGE SOLUTION**

Are you facing a challenge similar to our global pharmaceutical research customer? Reach out to Rittal today, and our team of experts will work with you to provide an IT infrastructure solution to match your unique requirements. Whether you require worldwide availability, repeatable system configuration, or the high security options, we have the expertise and robust product portfolio to provide the optimal solution.



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