T-Systems Edge Platform Delivers Low Latency with Supermicro

Figure 1. *German IT services and consulting company, T-Systems*

Executive Summary

Founded in 2000, T-Systems is a German global IT services and consulting company. It is a subsidiary of Deutsche Telekom, one of the world's leading integrated telecommunications companies with more than 184 million mobile customers across 50 countries.

T-Systems recently unveiled EdgAIR, an Edge Computing platform that delivers low latency for IoT applications at enterprise facilities. Edge Computing brings computation and data storage closer to the location where the data is generated in order to reduce latency, maintain network reliability, save bandwidth and comply with data security regulations.

This enables companies to use innovative, real-time applications in production, logistics and retail, and includes automated, guided vehicles and augmented and full virtual reality.

The EdgAIR platform works directly on-site, which means that the data is not sent via a central computer center or Cloud.

Challenges

As a leading provider of mobile and internet services to its customer base, T-Systems delivers content via an extensive network with a carrier-grade reliability environment - 99.9999%, which means less than 3 seconds of downtime per month. Achieving this reliability standard while providing critical connectivity and applications requires significant investments in capital and network management.

As 5G ramps up globally, T-Systems is challenged to deliver not just high-speed services and applications, but also support a larger number of devices that attach to the network. Current network architectures are being set up to achieve the breadth, depth and growth required to meet the demands while providing competitive pricing and returns on investments.

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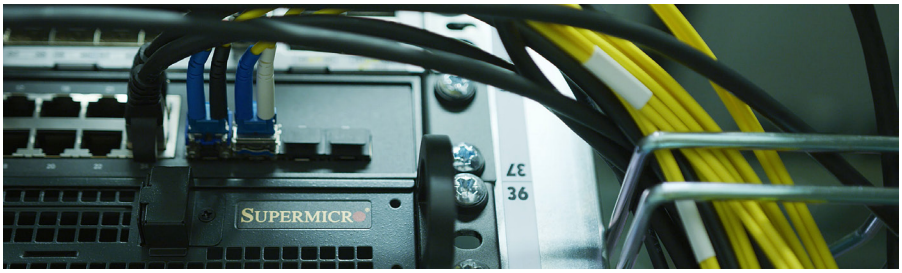
Figure 2. *Supermicro Servers for the Intelligent Edge, based on Intel® Xeon® D and 2nd Gen Intel® Xeon® Scalable Processors and supporting the Intel® FPGA Programmable Acceleration Card N3000*

Solutions

Supermicro's wide range of embedded solution technologies appealed to the EdgAIR development team for a number of reasons: the Intel® Xeon® D Edge-based architectures with the Intel® FPGA Programmable Acceleration Card N3000 are able to manage the heavy workloads that T-Systems requires to deliver low-latency applications, powerful processing, reliability in the field, and a highly-responsive support team.

Enabling multiple workloads on a single edge platform that is self-healing, self-managing and has common building blocks to reduce risk while increasing ROI is a valuable asset for expanding the T-Systems network.

Working as a partner with T-Systems, Supermicro is not just providing hardware-based architectures, but introducing its wide range of ecosystem partners to enable these Edge-based services.



How can using Supermicro's products help T-Systems better serve their customers?

T-Systems understands that common motherboards will reduce test workloads by providing solutions that enable multiple applications for customer services, and enable network functions on the same Edge device, providing increased returns. With Supermicro, enabling a modular, building-block type system with software infrastructure for VNFs, virtual machines and containerized workloads provides growth and options for end users at a lower total cost of ownership and with increased power efficiency.

Supermicro has recently launched its first server in an IP65-rated protective enclosure to meet the needs of outdoor environments such as cell towers and microcell sites. Along with a broad portfolio of data center solutions and edge platforms all will help to serve the needs of T-Systems' customers in the future.

Figure 3. *Thomas Weber, T-Systems*

Products under evaluation

T-Systems is currently evaluating multiple systems – Supermicro Edge Compute and Storage servers running Intel® Xeon® D processors and N-3000 FPGA accelerator cards – for AI and analytics. The evaluation has been running well in their lab. 'We are extremely pleased with the performance and feel this can have potential for wide-spread deployment,' said Thomas Weber, Principal Consultant, T-Systems.

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