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Use of new mobile communications technology at Rittal

5G at Rittal: The new mobile communications standard finds its way into manufacturing

Rittal is one of the first industrial players to receive a 5G frequency allocation. Before the end of the year, a private 5G mobile communications network will be installed in the new Haiger plant. The first pilot projects, for example in production monitoring and analysis, have already been defined.

Herborn, 25 February 2020 – Rittal wants to install and commission the 5G mobile communications network in Haiger as quickly as possible in a real manufacturing environment. The new wireless technology is aimed at greatly accelerating and simplifying data traffic – for example, in a video-based comparison of quantities with stored order data and in the step-by-step implementation of analytics for preventive maintenance.

"The powerful 5G mobile communications technology lets us exploit the potential and advantages of digitising our manufacturing processes even more. We want to take this to the next level in order to increase the flexibility and efficiency of our manufacturing process", says Carsten Röttchen, Managing Director International Production at Rittal.

With the new 5G mobile communications standard, data can be processed at a rate of 10 gigabits per second. That is 100 times faster than with the present LTE standard. 5G is regarded as the technology of the future, which will mean that industrial manufacturing processes can be networked and controlled even better, while the potential of Industry 4.0 can be fully exploited. "We expect that the high bandwidths, low latency times, real-

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time capability, improved availability and high levels of reliability will ensure further streamlining of the manufacturing processes in our plant, because we will be able to integrate 5G technology into manufacturing-critical and control-relevant tasks following the first test runs", Mr. Röttchen explains.

Edge cloud data centre in operation

In the future, it will be possible to collect data that is generated and which is needed at sensors, components, machinery or robots faster than ever before in an edge or cloud data centre, and to then have it analysed and evaluated by means of artificial intelligence (AI). The necessary IT requirements have already been met at the new Haiger plant. For example, ONCITE is in operation. This is a highly available, AI (artificial intelligence)-based edge-cloud data centre for the rapid processing and analysis of industrial data in real time. This unique solution, which recently won the "Innovation Champions Award", has now been launched on the market. "We will offer 5G technology to other customers as an ONCITE product component as soon as the tests in Haiger have been successfully completed," says Dr. Ritz, Managing Director of German Edge Cloud, a member of the Friedhelm Loh Group.

"We are ready for the off. We can take the next steps as soon as the manufacturers of 5G technology make the appropriate devices available. We expect that the installation of the technology for the first test runs will be completed by the end of 2020," Andreas Huck, Rittal's Managing Director for Controlling, Accounting, HR and IT explains.

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Highly automated manufacturing operations in Haiger

At the new Rittal plant in Haiger, over 100 high-tech machines and system components operate to manufacture approx. 9,000 AX and KX compact and small enclosures per day on 24,000 square metres of floor space. The plant is highly automated and processes around 35,000 metric tons of steel per year.

Today, higher-level control systems are already combining machines and handling systems to form a communication network to Industry 4.0 standards. Twenty driverless transport systems are in operation at the plant. Packaging, labelling and onward transport to distribution are also automated. With the help of knowledge-based systems that can be continuously taught, it will be possible to cut downtimes in the future while maintenance can be planned and interruptions to the sophisticated production process reduced.

Digitised order fulfilment will ensure the availability in the Global Distribution Center of the standard portfolio including accessories. From customer to customer – end-to-end data, configuration and engineering at the customer's site, up to and including delivery and service.

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Caption(s)

Picture 1 (fri191937500.jpg): Before the end of the year, a private 5G mobile communications network will be installed in the new Haiger plant.

Picture 2 (fri191935800.jpg): Rittal is one of the first industrial players to receive a 5G frequency allocation.

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Picture 3 (fri191950200.jpg): "The powerful 5G mobile communications technology lets us exploit the potential and advantages of digitising our manufacturing processes even more. We want to take this to the next level in order to increase the flexibility and efficiency of our manufacturing process", says Carsten Röttchen, Managing Director International Production at Rittal.

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About Rittal

Rittal, headquartered in Herborn, Germany, is a leading global provider of solutions for industrial enclosures, power distribution, climate control and IT infrastructure, as well as software and services. Systems made by Rittal can be found in more than 90 percent of all global branches of industry, including mechanical and plant engineering, food and beverage production and in IT and telecommunications.

The international market leader's product portfolio includes configurable enclosures, with data available across the entire production process. Smart Rittal cooling systems, with an average of 75 per cent lower power consumption and high carbon dioxide savings, can communicate with the manufacturing landscape, enabling predictive maintenance and servicing. The offering also includes innovative IT products, from IT racks and modular data centres, to edge and hyperscale computing solutions.

Leading software providers Eplan and Cideon support the value chain, providing interdisciplinary engineering solutions, while Rittal Automation Systems offers solutions for switchgear. Within Germany, Rittal can supply products on demand within 24 hours – with precision, flexibility and efficiency.

Founded in 1961, Rittal is the largest company in the owner-operated Friedhelm Loh Group. The Friedhelm Loh Group is active worldwide, with 18 production sites and 80 international subsidiaries. It has approximately 12,500 employees and posted revenues of €2.6 billion in fiscal 2018. In 2019, the family-run business was named one of Germany's leading employers by the Top Employers Institute, for the eleventh year running. Within the scope of a Germany-wide survey, Focus Money magazine identified the Friedhelm Loh Group as one of the nation's best providers of vocational training for the fourth time in 2019.

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For more information, visit www.rittal.com and www.friedhelm-loh-group.com.