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Convenient machine communication

Wickert Maschinenbau GmbH relies on REX industrial routers from Helmholtz – “More than standard is our goal”

Remote access to Ethernet systems over a secure VPN tunnel has become widespread practice, but the actual quality and practicality of a corresponding solution depend on a large number of details. Globally active special mechanical engineering company Wickert is well experienced in this area, which is why it's been relying on REX industrial routers and the “myREX24.net” VPN portal from Helmholtz for years now.

This special mechanical engineering company out of Landau in the Pfalz region of Germany manufactures presses and press systems and also offers services involving the manufacture of molded parts. Customers of the family-run business – including plastic processors, hardening shops and laboratories, among others – are spread out across the globe. That's why modern remote access to the systems in line with the company motto “More than standard” is required.

Secure remote maintenance of machines and systems

At Wickert, remote access is a topic of great importance because of the

distances involved – it eliminates the need for time-consuming and expensive in-person, on-site visits by technicians. Lots of companies devise concrete specifications for IT security and system requirements, though.

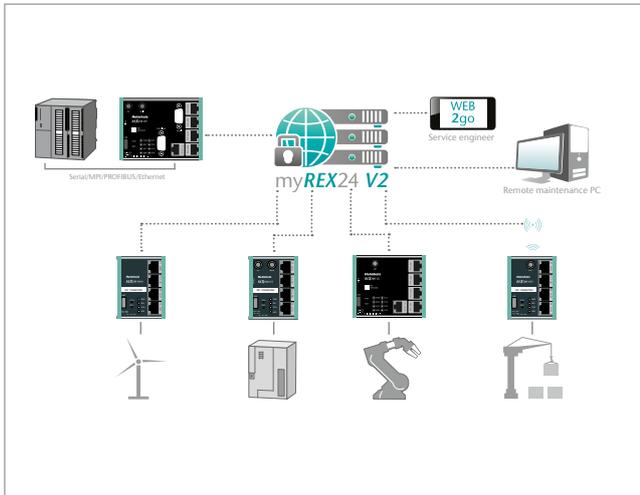
Thanks to cooperative support from Helmholtz, Wickert is able to comply with them using virtual servers running on secured physical servers located at the Landau site. “We do this because we need to map out the entire range of requirements of our customers,” said Marius Damm, deputy head of electrical engineering at Wickert, in justifying the process.

However, he also recognized that “this is often very laborious in practice.”

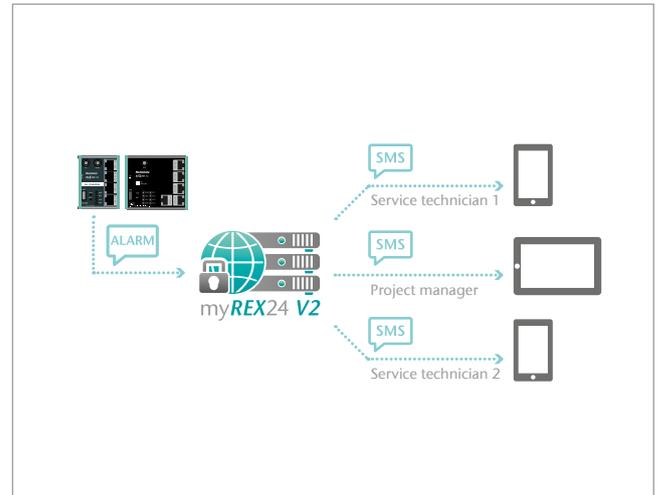
That's why Wickert has offered a remote solution since 2014 which, quite unconventionally, meets the same high security standards, but is considerably more flexible, easier to use and more convenient overall.



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All configuration and remote maintenance takes place perfectly coordinated with the myREX24 V2 portal.



Receive alarm messages via SMS, e-mail or telephone or simply using the integrated message system.

Easy data transfer using an industrial router and VPN tunnel

Specifically, REX industrial routers from Helmholz are used in conjunction with the “myREX24.net” portal. Data transmission generally occurs encrypted over a VPN tunnel, with the foundation for this being provided by the secure OpenVPN protocol. This technology ensures a very high level of security for the communication path between the system and the maintenance PC. The REX router normally sits behind the firewall of the customer, and the PC from which remote access should originate is protected by a firewall. In the past, unwieldy solutions which would make it possible to process the dynamically assigned IP addresses of the participants, for example, were in correspondingly high demand.

That’s why Helmholz has, since 2012, been offering a modern alternative which is both secure and easy: “my-REX24.net”. This portal serves as a mediation server for VPN communication between the provider of remote maintenance and the customer facility. This means that both sides can establish the VPN tunnel as an outgoing connection. Firewalls, as well as restrictions on services or cellular network operators are therefore no longer an issue. That’s because they restrict data traffic only into the network, not out of the network. The outgoing connections are then briefly on hold until the VPN tunnel is established, through which the actual communication occurs.

Wickert chose the REX industrial router and “myREX24.net” portal following an extensive benchmarking process.

The company had a number of good reasons to go with the Helmholz system here, the first of which being that “the routers are highly scalable,” according to Marius Damm. Continuing, Damm said, “Unlike with other providers, I can cover all the transmission standards – like WAN and GSM – with a single REX device.”

The initial REX 300 series of models designed for integration into S7 and PROFIBUS environments first came into use in 2014. Since 2017, the compact REX 100 has complemented the Wickert range as an additional option. Its scope of functions is concentrated on the essential core features, but it also has digital inputs as well. Regardless of the manufacturer, the palm-sized device can also be snapped onto any standard rail. In 2019, Wickert’s REX 300 was finally replaced with the new REX 250, the new model which features all the previous functions plus an integrated MPI-PROFIBUS interface.



The second reason given by Marius Damm was the “myREX24.net” portal. “As a cloud solution, it enables the system to work regardless of the location – from a home office, for example.” The only requirements are an Internet connection and an access account created once in the portal. This makes it possible to maintain the operational security of the customer at all times, even when travel is restricted. According to Damm’s observations, “Employee acceptance is also high, as they appreciate the flexibility provided by the portal.”



configuration and simpler project categorization, for example.

Last, but not least, Helmholz (the third argument) also scored when it came time to choose a provider – the companies had already had good experiences with one another in the past, with Helmholz having provided IO modules and memory cards for Wickert machines for a long time. “This positive experience continued as Helmholz provided support when the new technology was introduced,” said Marius Damm looking back.

Learn more about secure IoT machine access with Helmholz:



View the REX Ethernet router product portfolio online!

The configuration is also created on the portal and can then be easily loaded onto the REX router using a USB stick, for example. The portal also provides several other benefits, such as detailed reports and a way to manage specific machines individually, which makes it possible to create different permission levels in order to manage all machines online. At the same time, the system also ensures that all operators will be able to see the current status of each machine in real-time. Wickert is already using the new version: V2. This enables even easier

Practical experience

To Wickert, that decision has proven itself to be a good one many times over. Six years after the introduction of the first REX industrial router, two-thirds of new machine customers choose this kind of remote solution today. Altogether, more than 250 machines have already been outfitted with REX industrial routers. “And I can’t recall a single device being defective,” said Marius Damm in summing up his experiences.

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