

Siemens makes a complete private 5G solution available to industry

- **Infrastructure for private industrial 5G networks with a focus on automation applications**
- **The solution is already in use at Siemens plants and pilot customers like Salzgitter AG**
- **5G is crucial for mobile robots, autonomous logistics, driverless transport systems, and edge devices**

For the first time, the technology company Siemens is launching a private infrastructure developed in-house for the 5G mobile communications standard. The solution enables industrial companies to build their own local 5G networks that will provide optimal support for automation applications. "By building their own 5G networks, industrial companies are launching the next stage of connected production," says Axel Lorenz, CEO of Process Automation at Siemens. "5G is crucial for applications like mobile robots, autonomous logistics, and driverless transport systems in factories. Siemens' private 5G infrastructure also gives users sole control over the data in their 5G network at all times, and they can custom-configure the network for their applications."

Other scenarios for industrial 5G wireless technology include the integrated use of connected tablets, VR glasses, and smart tools. In addition, edge devices can be used flexibly: for example, in brownfield applications where it's difficult to lay cables. In contrast to other wireless technologies, private 5G networks use a licensed frequency band and can therefore be operated without interference.

5G network components from a single source

Siemens has developed its 5G infrastructure specifically for the requirements of industrial customers and industrial applications. It consists of a 5G core and a radio access network (RAN). The RAN includes the central unit (CU), the distributed unit (DU), and the radio units (RUs). Different 5G end-devices can connect to the 5G infrastructure and communicate in the private network. The all-in-one 5G solution is also designed for use in harsh industrial environments.

Before the market launch, Siemens extensively tested its private 5G infrastructure in real production environments like at the Siemens production site in Karlsruhe. By implementing and operating the prototype network in its own production facilities, Siemens was able to extensively test and refine the technology, ensuring that it can withstand the requirements of industrial production environments and support industrial applications. The private Siemens 5G infrastructure is now available in Germany, and other countries will follow. One of the pilot customers for the complete 5G solution is the German steel group Salzgitter AG: "We don't just want to build any 5G network, we want an industrial 5G that meets the enormous requirements of the steel industry," says Gerd Baresch, Chief Technology Officer at Salzgitter Flachstahl GmbH. "Wherever we need to wirelessly transmit data reliably and securely – from real-time camera images to safety-relevant emergency-stop signals for driverless transport systems – we need future-proof communication technology. Siemens has been a longstanding reliable partner for network solutions, and this is precisely why we decided to work with them."

Highest data security with 5G infrastructure in campus networks

Private 5G networks, also known as campus networks, are 5G networks restricted to a defined company premises, a defined area, or an individual building. From Siemens' point of view, private 5G networks offer many advantages for industry: Companies build them locally at their locations and can precisely modify them to meet their needs and applications. Companies also have full control over their data,

because private 5G networks use their own local 5G spectrum. A private 5G infrastructure like the one offered by Siemens is required for building a local 5G network and making the 5G signal available on the company's premises.

Siemens has been offering industrial 5G routers like the SCALANCE MUM853-1 and MUM856-1 for connecting robots, AGVs, and other industrial devices to a private 5G network since 2021. These routers are the final components necessary for efficient wireless connectivity in industrial environments.



Private industrial 5G infrastructure for the deployment of a local 5G network



SCALANCE M80000 industrial 5G radio unit

For more information on the Siemens industrial 5G offering, please visit www.siemens.com/private-5g-networks

This press release can be found at: <https://sie.ag/6w81dY>

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supports customers to achieve greater productivity and flexibility. DI is constantly adding innovations to its portfolio to integrate cutting-edge future technologies. Siemens Digital Industries has its global headquarters in Nuremberg, Germany, and has around 72,000 employees internationally.

Siemens AG (Berlin and Munich) is a technology company focused on industry, infrastructure, transport, and healthcare. From more resource-efficient factories, resilient supply chains, and smarter buildings and grids, to cleaner and more comfortable transportation as well as advanced healthcare, the company creates technology with purpose adding real value for customers. By combining the real and the digital worlds, Siemens empowers its customers to transform their industries and markets, helping them to transform the everyday for billions of people. Siemens also owns a majority stake in the publicly listed company Siemens Healthineers, a globally leading medical technology provider shaping the future of healthcare. In addition, Siemens holds a minority stake in Siemens Energy, a global leader in the transmission and generation of electrical power.

In fiscal 2022, which ended on September 30, 2022, the Siemens Group generated revenue of €72.0 billion and net income of €4.4 billion. As of September 30, 2022, the company employed around 311,000 people worldwide.

Further information is available on the Internet at www.siemens.com.