

## PRESS RELEASE

## New Adapter Board RAB4 from Rutronik System Solutions enables centimeter-precise positioning in real-time



Innovative hardware tool allows cost-effective verification of RTK technology.

**Ispringen, March 13, 2024 – Precise positioning has become increasingly important in many areas and applications. Real-Time Kinematic (RTK) offers significantly greater accuracy than conventional multi-GNSS systems and continues to grow in cost-effectiveness. Together with the Rutronik Wireless Competence Center, the experts from Rutronik System Solutions have developed the Adapter Board RAB4, which facilitates testing the performance of RTK without designing any hardware. By accelerating the pre-development phase and reducing costs, the RAB4 helps to bring applications to market faster.**

Autonomous vehicles, drones, and also agricultural machines rely on accurate positioning in real-time. RTK increases the precision of satellite system positions using a base station that sends correction data to a moving receiver. That allows an accuracy of one to two centimeters, even with fast-moving objects. “RTK is not a new technology and has been used in some areas for a long time. However, the costs were very high until now. Nowadays, cheaper but nevertheless powerful modules are available. That makes the technology and its advantages interesting for other areas of application. With our RAB4, we offer a modern hardware solution to test RTK quickly and cost-effectively for various applications,” notes Stephan Menze, Head of Global Innovation Management at Rutronik.

### State-of-the-art components for the best result

The RAB4 features high-performance components, all available on the Rutronik Linecard. The high-precision UM980 RTK positioning module from Unicore Communications uses the latest generation of the NebulasIV GNSS SoC, offers a high positioning rate, and supports all available GNSS frequencies. It is ideal for navigation and positioning applications. “We are among the top suppliers in the high-precision positioning modules industry and have established a robust partnership with Rutronik. We are thrilled to see the release of RAB4. We believe that integrating our high-performance UM980 module into the

Adapter Board will significantly enhance awareness of RTK technology and demonstrate the capabilities of our module to developers,” stated Zhang Bing, Vice President Marketing of Unicore.

For absolute positioning, a 4G LTE module with an integrated standard multi-GNSS receiver from Telit Cinterion's LE910 series is integrated on the Adapter Board. Another advantage is that the integration of a GNSS and RTK receiver makes it possible to compare the outputs directly with each other without having to use several development kits from different suppliers. The RAB4 also includes a 100 MB prepaid SIM card. Thanks to this combination, NTRIP correction data can be downloaded from the Internet. It is not necessary to operate an own reference station.

### The modular concept enables a wide range of development projects

Thanks to the Arduino interface, the RAB4 is easy to combine with other boards like the RDK3 from Rutronik System Solutions, a Base Board that allows wireless connections to be realized using Bluetooth® Low Energy. The application example from Rutronik System Solutions demonstrates how the connection works. Using this example, a rover was developed in-house that can be controlled with centimeter precision via an app. It will celebrate its premiere at the [Rutronik booth](#) at embedded world 2024 in Nuremberg.

Further information about the Adapter Board RAB4 and the application example from Rutronik System Solutions is available at [www.rutronik.com](http://www.rutronik.com).

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#### ABOUT RUTRONIK

Rutronik Elektronische Bauelemente GmbH was founded in 1973 and for more than five decades the independent family-owned company based in Ispringen (Germany) stands for sustainable growth with a focus on high-growth future markets. In the fiscal year 2023, its around 1,900 employees generated sales of 1.24 billion euros, serving more than 40,000 customers.

With more than 80 offices worldwide and logistics centers in Austin (Texas), Shanghai, Singapore, and Hong Kong, Rutronik ensures comprehensive customer support in Europe, Asia, and North America. The company focuses on high-growth future markets that will shape the world of electronics tomorrow. These are Advanced Materials, Advanced Measurement, Processing & Analytics, Advanced Robotics, Automation, Biotechnology, Energy & Power, Future Mobility, IIoT & Internet of Everything, Industry 4.0, Medical & Healthcare, and Transportation, Logistics & Supply Chain.

To serve customers in these future markets, the RUTRONIK AUTOMOTIVE, RUTRONIK EMBEDDED, RUTRONIK IT ELECTRONICS, RUTRONIK POWER, RUTRONIK SMART, and RUTRONIK SYSTEM SOLUTIONS initiatives bundle expertise, specific product portfolios, and consultancy support. In this regard, Rutronik relies on customized solutions that are tailored to the respective needs. The services range from competent technical support in product development and Design-Ins, through the diverse product portfolio of leading manufacturers, to the company's software and hardware solutions with partly patented Rutronik IP.

Customized logistics systems, reliable supply chain management, and logistics centers worldwide ensure on-time delivery. The Rutronik24 e-commerce platform completes Rutronik's range of services.

Further information is available at [www.rutronik.com](http://www.rutronik.com). The new [corporate film](#) also provides exclusive insights into the history and development of Rutronik.

