

Home of Innovation

## Connectivity Solutions for Delivery Robots

MEDICAL & INDUSTRIES





## Home of Innovation

Rosenberger is one of the world's leading manufacturers of impedance-controlled and optical connectivity solutions. We provide solutions in high-frequency, high-voltage and fiber-optic technology for mobile communication networks, data centers, test & measurement applications, automotive electronics, as well as high-voltage contact systems, medical electronics and aerospace engineering.

A global network of R&D, manufacturing and assembly locations provides innovation, optimized cost structure and excellent customer services. Around 11,000 employees are involved in the development, production and distribution of our products.

## Driven by Perfection

Rosenberger's mission is to be an innovation and technology leader within its business segments.

The most modern manufacturing technologies, the highest possible levels of efficiency in production and continuous development are our core competencies. This guarantees not just fast delivery and strict adherence to delivery dates, but also the highest levels of product quality.

In close cooperation with our customers our offering is complete product development, from the first idea to volume production.

By utilizing its global manufacturing infrastructure, the Rosenberger Group is well-equipped for handling both small and large production volumes.

# Delivery Robots

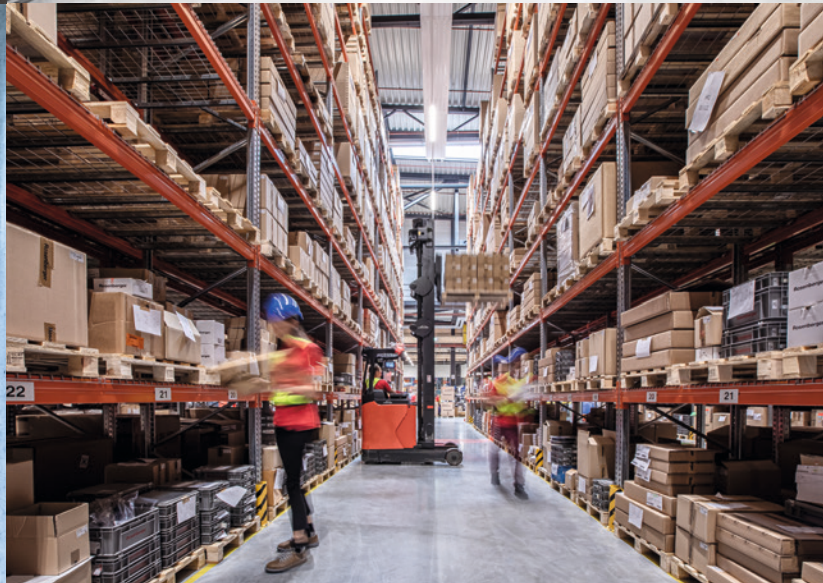
Responding to the rapidly growing global demand for unmanned ground vehicles (UGVs) and delivery robots, Rosenberger now offers a fit for purpose portfolio of high quality connector solutions.

UGVs are well-proven in a wide variety of areas. Their versatility, productivity, cost-effectiveness and environmentally-friendly credentials are also driving them deeper into the commercial world to perform an array of applications. From product picking in warehouses, 'last mile' parcel deliveries to homes and businesses, to the transportation of medical supplies around hospitals, and spare parts delivery on factory floors.

# Keeping your UGVs on the Right Track

UGVs depend on technology innovation for ensuring seamless performance under any conditions. From the sophisticated software that manages their movement detection and navigation systems, to the use of artificial intelligence (AI) for maximizing machine learning capabilities.

Equally, for maximum UGV control and responsiveness, their RF connectors must ensure uninterrupted signal and power transmission. Connectors must also be capable of withstanding vibration, water ingress, and extreme operating temperatures without impairment to performance.



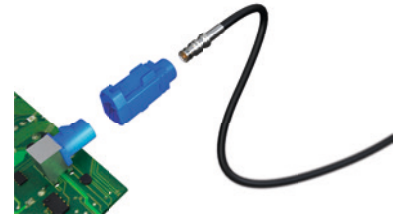
# Rosenberger – UGV Connectors

## FAKRA

Rosenberger FAKRA standard connectors meet the high mechanical and electrical requirements of the automotive industry. The high quality FAKRA connectors ensure maximum electrical and mechanical performance. The sophisticated coding system allows easy identification and avoids potential mis-mating.

### Applications

- Antennas
- GPS telematics or navigation
- Mobile communication
- RF bluetooth / WLAN applications
- Sensors

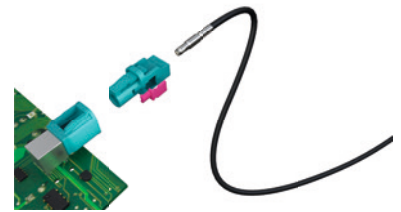


## HFM®

Rosenberger HFM® – High-Speed FAKRA-Mini is the next generation coaxial connector system for real-time high-speed data transmission. This intelligent modular system enables fast transmission up to 20 Gbps. Key characteristics include reduced weight and space savings. Their small size makes it possible to locate different modules in the tightest of installation areas, with space savings of up to 80% compared to conventional FAKRA solutions.

### Applications

- Autonomous driving
- Navigation
- Sensors
- Next Generation WLAN: “WiGig” (Wireless Gigabit)



## RosenbergerHSD®

RosenbergerHSD® is a homogeneous impedance-controlled interconnect system which directly addresses the high-speed data, low-voltage requirements of real-time automotive industry applications. Extremely compact and durable this 100 Ohm fully shielded interconnect system utilizes shielded twisted quad cables and features mechanical keying and latching for high connection retention, as well as coding to avoid misuse.

### Applications

- Robot Electronic
- Digital symmetrical networks
- USB 1.0, 2.0, 3.0
- LVDS
- Ethernet
- APIX®
- CAN (Controller Area Network)

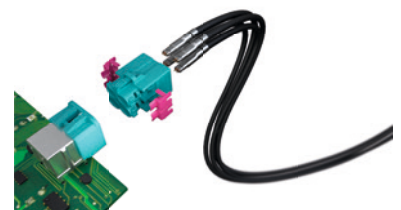


## H-MTD®

Rosenberger H-MTD® is a 360° fully shielded differential connector system for Ethernet applications. The newly developed system has successfully combined high-performance data transmission, of up to 15 GHz or 20 Gbps, in a compact yet robust automotive grade housing.

### Applications

- 4K Cameras
- Autonomous driving
- Radar
- LiDAR

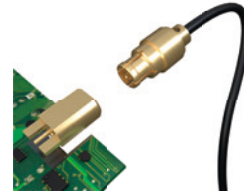


### Mini-SMP

Rosenberger Mini-SMP coaxial connectors are extremely small, approximately 70% of standard SMP size. They are designed for applications up to 65 GHz and mainly for high-speed signal transmission (typically 10 or 40 Gbps). Plugs are available as smooth bore-versions – for plug-in technology and backplane applications – and as vibration resistant full detent types, for the highest mechanical loads.

#### Applications

- Antennas
- Radio Remote Control
- LiDAR
- Sensors



### SMA

Our SMA coaxial connectors are designed for handling frequencies up to 18 GHz. They offer high performance and long life combined with high mechanical stability and excellent electrical properties.

#### Applications

- Antennas
- Radio Remote Control
- LiDAR
- Sensors



### RoPD®

RoPD® - Rosenberger Power Data Connectors feature magnetic self-detection, making them ideal for frequent battery charging and changing applications. Our RoPD® connectors are particularly suited to data communication and power transmission of voltages up to 60 V and current loads up to 40 A. The magnetic locking and precision self-mating capability prevents any accidental or forced disconnection from damaging the connector or the UGV. Furthermore, the high tolerance pin and socket design permits a large number of mating cycles.

#### Applications

- Delivery Robots
- Drones
- Industrial Trucks
- E-Bikes
- E-Scooter
- E-Wheelchairs







## Miniaturization

The electronics sector is subjected to constant miniaturization and further development. At the same time manufacturers demand high quality connectors for smarter electronic solutions that save space and reduce the weight of equipment.

Rosenberger has responded to the trend towards smaller, more cost-effective components, offering extensive experience in the design, production and verification of micro parts. The company also provides state-of-the-art design, simulation and manufacturing capabilities.

## Telematics

Reliable communication systems have become a part of our daily life. Based on IoT technology, business processes can be set up with a greater degree of automation and run more efficiently.

Consequently, Rosenberger now offers solutions for automatic tracking and onboard units in conjunction with a highly scalable, modular and versatile software platform (Commander). This ensures all assets, vehicles, machines, and objects can be efficiently connected and managed.



## Website

For more information refer to our website:  
[www.rosenberger.com/m&i](http://www.rosenberger.com/m&i)

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