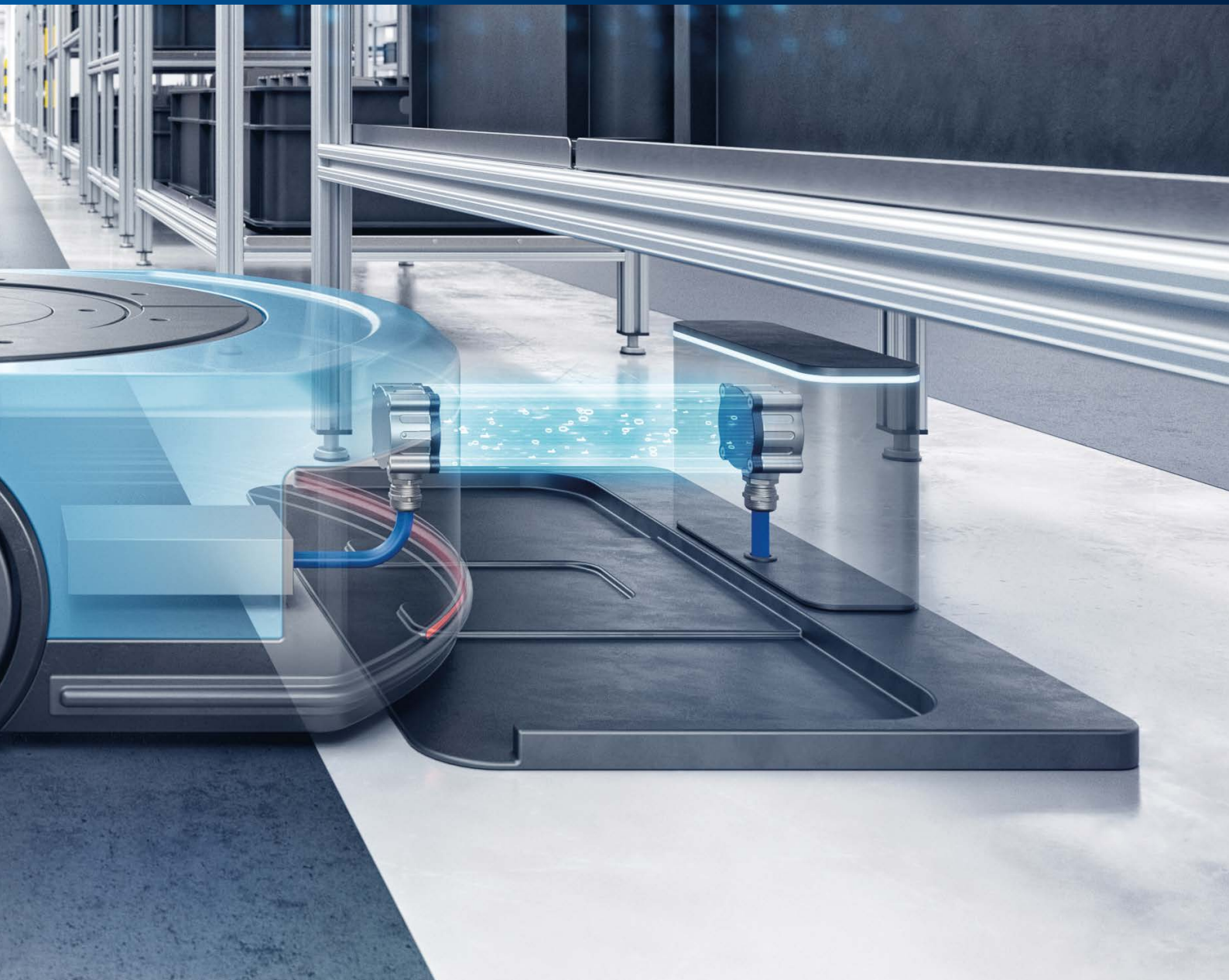
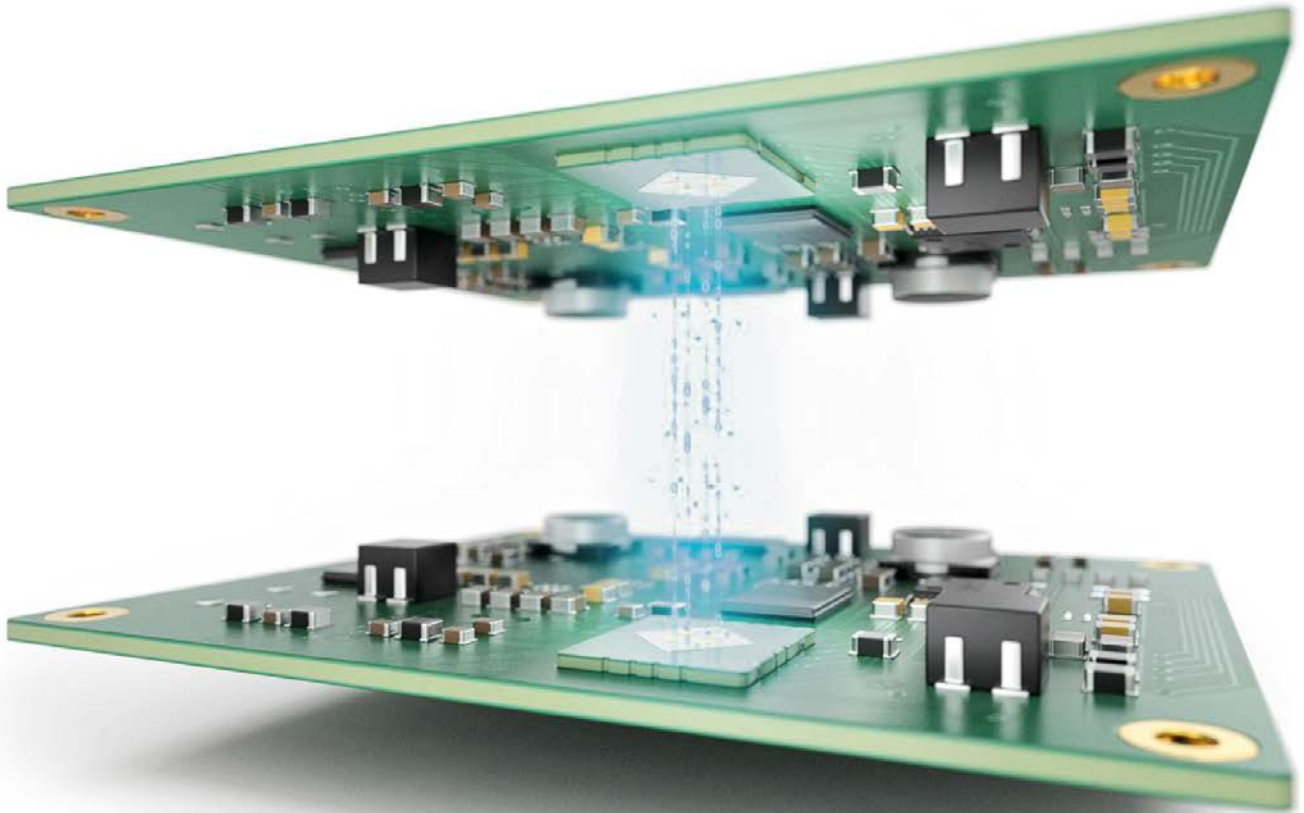


Contactless High-Speed Data and Power Transmission

RoProxCon®

INTERCONNECT





Data and Power Transmission – Without Physical Connection

RoProxCon® transmits data and power contactless over distances of up to 20 mm. Data transmission utilizes radio technology with a 60 GHz carrier frequency, enabling high data rates of 3.125 Gbps with extremely low latency. The robust connectors can withstand high vibration loads and transmit 30 W of electrical power via inductive coupling. This opens up entirely new communication possibilities.

Benefits

- **Wear-free:** Reliable contactless connection even under vibration
- **Unlimited rotation:** Stable full-duplex transmission with 360° rotation
- **Flexible mounting:** High level of options
- **Reliable even in motion:** No cable breakage, ideal for dynamic applications
- **High data rates and efficient power transmission:** Powerful with a small form factor
- **Robust:** Operates reliably despite dust, dirt and moisture



RoProxCon® System-on-Module (SoM)

- Full duplex data transmission up to 3.125 Gbps based on ST60
- High tolerance against radial and axial misalignment
- No influence of 360° rotation
- Small form factor: 14,2 x 12,5 mm
- Low latency down to 7 ns
- Transmission through a wide variety of materials

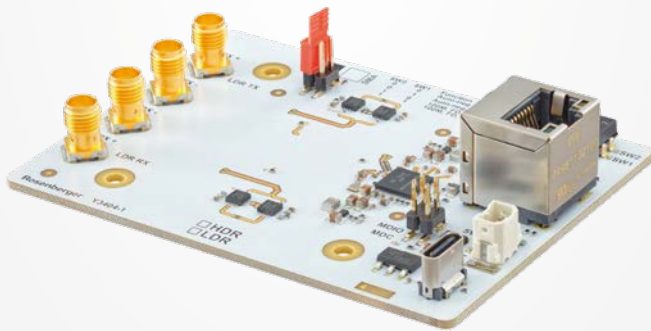
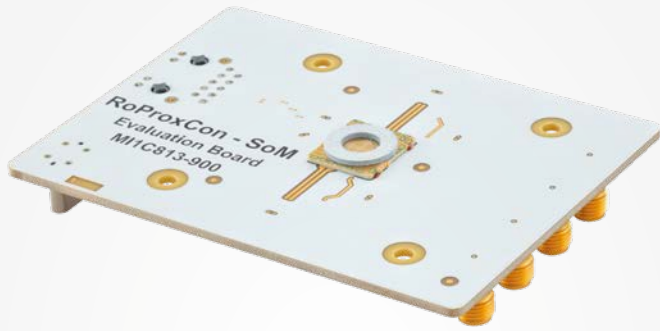
RoProxCon® Hybrid

- Power transmission up to 30 W
- Full duplex transmission during 360° rotation to each other
- Gigabit-Ethernet transmission for Industrial Ethernet integrated (for example EtherCat and ProfiNet)
- Transmission from device to device or to „other“ RoProxCon® through closed housings
- Hermetically sealed
- Foreign object detection (FOD)



RoProxCon® Data

- Full duplex transmission during 360° rotation to each other
- Gigabit-Ethernet transmission for Industrial Ethernet integrated (for example EtherCat and ProfiNet)
- Individual localization and integration
- Transmission from device to device or to „other“ RoProxCon® through closed housings
- Hermetically sealed



RoProxCon® Meets Single Pair Ethernet (SPE)

RoProxCon® opens up new possibilities for Single Pair Ethernet (SPE). By combining innovative contactless connection technology with modern data transmission, it enables reliable, compact, and high-performance solutions for industrial applications. With its high level of flexibility, RoProxCon® is also compatible with SPE protocols, making it future-proof for upcoming developments in industrial communication.

RoProxCon® and SPE – A Perfect Match:

While SPE enables efficient data transmission over a single pair of wires, RoProxCon® provides a robust contactless connection, ideal for demanding industrial environments. The technology supports growing requirements for miniaturization, efficiency, and high data rates, opening new opportunities for integrating SPE into robotics and automation systems.

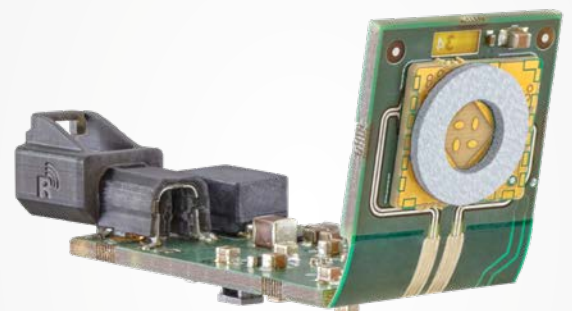
RoProxCon® – Ready for Today. And for the SPE Protocols of Tomorrow.

Fast Validation for New Developments

With the RoProxCon® Evaluation Board, Rosenberger provides a powerful platform for developing and integrating contactless data transmission solutions. At its core is the compact RoProxCon® System-on-Module (SoM) – a high-frequency module designed for stable short-range data transmission. The evaluation board enables engineers, OEMs, and system integrators to test the technology in realistic environments and integrate it into customized applications.

Benefits

- **Simple Setup:** Fast and intuitive commissioning for immediate testing
- **High Flexibility:** Easily adaptable to specific system requirements
- **Accelerated Development:** Precise and repeatable results that speed up development cycles





RoProxCon® in Applications

In many industrial applications, conventional connectors reach their limits – especially in scenarios involving frequent mating and unmating, such as tool changes on robots. Their service life is therefore limited, as the contacts can wear out due to contamination or deformation.

RoProxCon® Makes the Difference

- **Robotics:** Maximum mobility
- **Machinery and plant engineering:** The hollow shaft itself serves as the carrier of the data transmission system, providing a reliable alternative to slip rings.
- **Tool changer:** Infinite mating cycles, resistant to dirt, dust and vibration



Website

For more information refer to our website:
www.rosenberger.com/contactless

Rosenberger

Rosenberger Hochfrequenztechnik GmbH & Co. KG

Hauptstraße 1 | 83413 Fridolfing

P.O. Box 1260 | 84526 Tittmoning

Germany

Phone +49 8684 18-0

info@rosenberger.com

www.rosenberger.com

Certified by IATF 16949 · DIN EN 9100 · ISO 9001 · ISO 14001 · ISO 45001 · ISO 50001

Order No.

pA 514223 · Info4RoProxConFlyerEN
100/2026

Rosenberger® is a registered trademark by Rosenberger Hochfrequenztechnik GmbH & Co. KG.
All rights reserved.

© Rosenberger 2026