

Connectivity Solutions for
Drone-Applications

INTERCONNECT





Drones and Connectivity

In high-precision UAV (Unmanned Aerial Vehicle) systems, the seamless integration of all subsystems is essential – from flight control and navigation to communication, charging and safety systems. Rosenberger provides high-quality and reliable connector solutions that stand for precision, flexibility,

and quality – and reflect our commitment to bringing cutting-edge technology to the skies. The product portfolio covers a broad range of applications – from compact drones to advanced industrial UAVs – offering connectivity solutions for every requirement.

Why is Connectivity Important for Drones?

Secure Control: Reliable communication systems ensure precise flight maneuvers and maximum control.

Real-Time Data Transmission: Live images and sensor data are transmitted directly to ground stations or cloud systems.

Efficient Fleet Management: Drone fleets communicate over a shared network – enabling optimal coordination and maximum control.

Fast Response: High-speed connections within the systems allow immediate intervention for course corrections or critical situations.

Reliability: Ensures stable and secure system performance without interruption, even under demanding conditions.



Flight Control



Navigation e. g. GPS



Communication Systems



Charging Systems



Camera-Systems



Safety Systems

FAKRA – RF

Specification

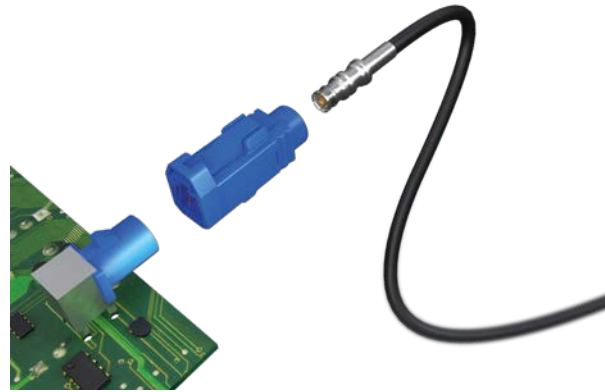
- Frequency range DC up to 6 GHz
- High data rates up to 8 Gbps
- Primary and secondary lock

Application



Benefit

- Established product portfolio for camera applications



SMA

Specification

- Frequency range DC up to 18 GHz
- Temperature range -65 °C bis +165 °C
- Screw in locking mechanism

Application



Benefit

- Established, robust connector
- Reliable electrical characteristics



HFM® – High Speed FAKRA-Mini

Specification

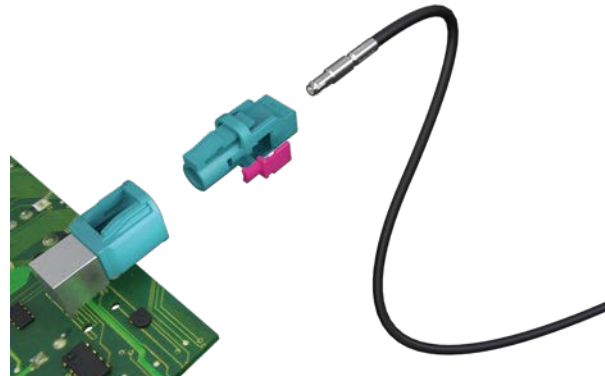
- Frequency range DC up to 15 GHz
- High data rates up to 20 Gbps
- Compact structure – optimized use of space
- Robust design with excellent mechanical performance

Application



Benefit

- Miniaturised high performance connector



H-MTD® – High-Speed Modular Twisted-Pair Data

Specification

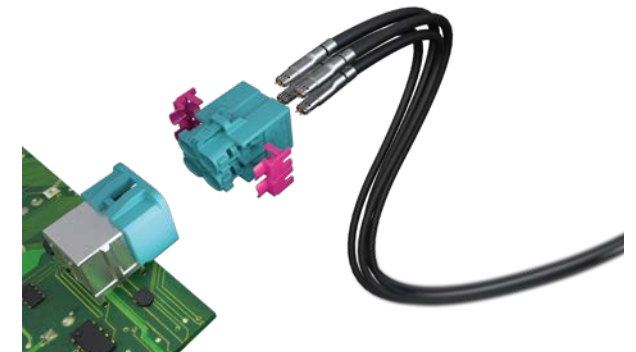
- Frequency range DC up to 15 GHz
- High data rates up to 20 Gbps
- High density, compact housing

Application



Benefit

- Wide product portfolio, expandable with MQS contacts for power transmission



Mini-SMP – Miniature SMP

Specification

- Frequency range DC up to 65 GHz
- High data rates up to 40 Gbps
- Very small installation space

Application



Benefit

- Excellent electrical characteristics e. g. shielding



RosenbergerHSD® – High-Speed-Data Connector

Specification

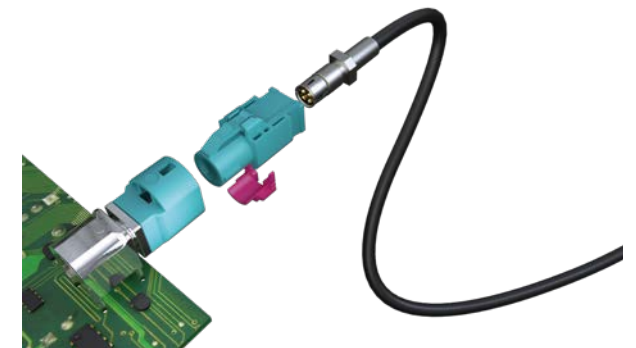
- Frequency range DC up to 6 GHz
- High data rates up to 8 Gbps
- Primary and secondary lock

Application



Benefit

- Power & data in one system (PoE/PoDL)



RoPD® Rosenberg Power Data Interface

Specification

- Magnetic self-mating mechanism
- Mating cycles: min. 2500
- Watertight and robust (IP65/IP67)
- Power transmission to 60 V DC/40A

Application



Benefit

- fast, reliable, easy



Autonomous Drone Charging Station

Specification

- Self-Alignment while landing
- Autonomous charging
- Customized power level

Application



Benefit

- Charging without human interaction



Modular Camera Solutions

Specification

- Interfaces to the wiring harness:
- HFM® Frequency range up to 15 GHz (up to 20 Gbps)
- RMC® Frequency range up to 9 GHz
- FAKRA Frequency range up to 6 GHz (up to 8 Gbps)

Application



Benefit

- Modular system for data transmission, expandable with MQS contacts for power transmission



RoProxCon® Contactless Data and Power Transmission

Specification

- Power transmission up to 30 W
- Gigabit-Ethernet transmission
- High data rates up to 3.125 Gbps

Application



Benefit

- Contactless data and power transmission
- Dust and Dirt resistant, robust, unlimited 360° rotation

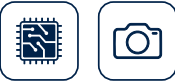


Multiheader

Specification

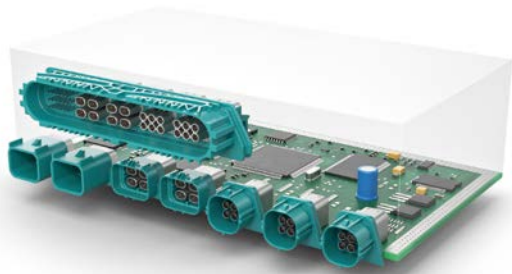
- Frequency range data connectors up to 20 GHz
- Space savings of up to 40 %
- Modular concept

Application



Benefit

- Compact and modular data and power design





Website

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

Rosenberger

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