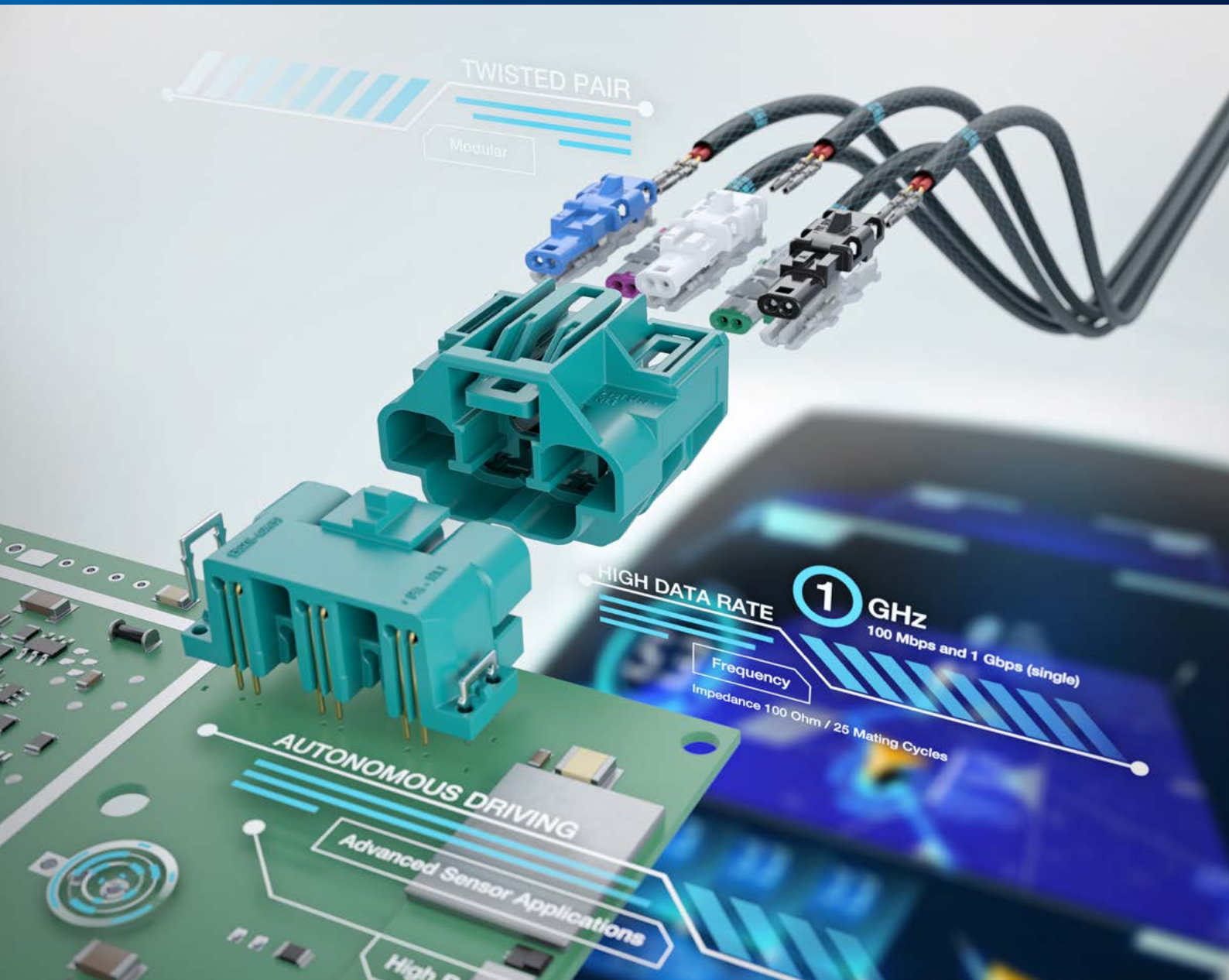
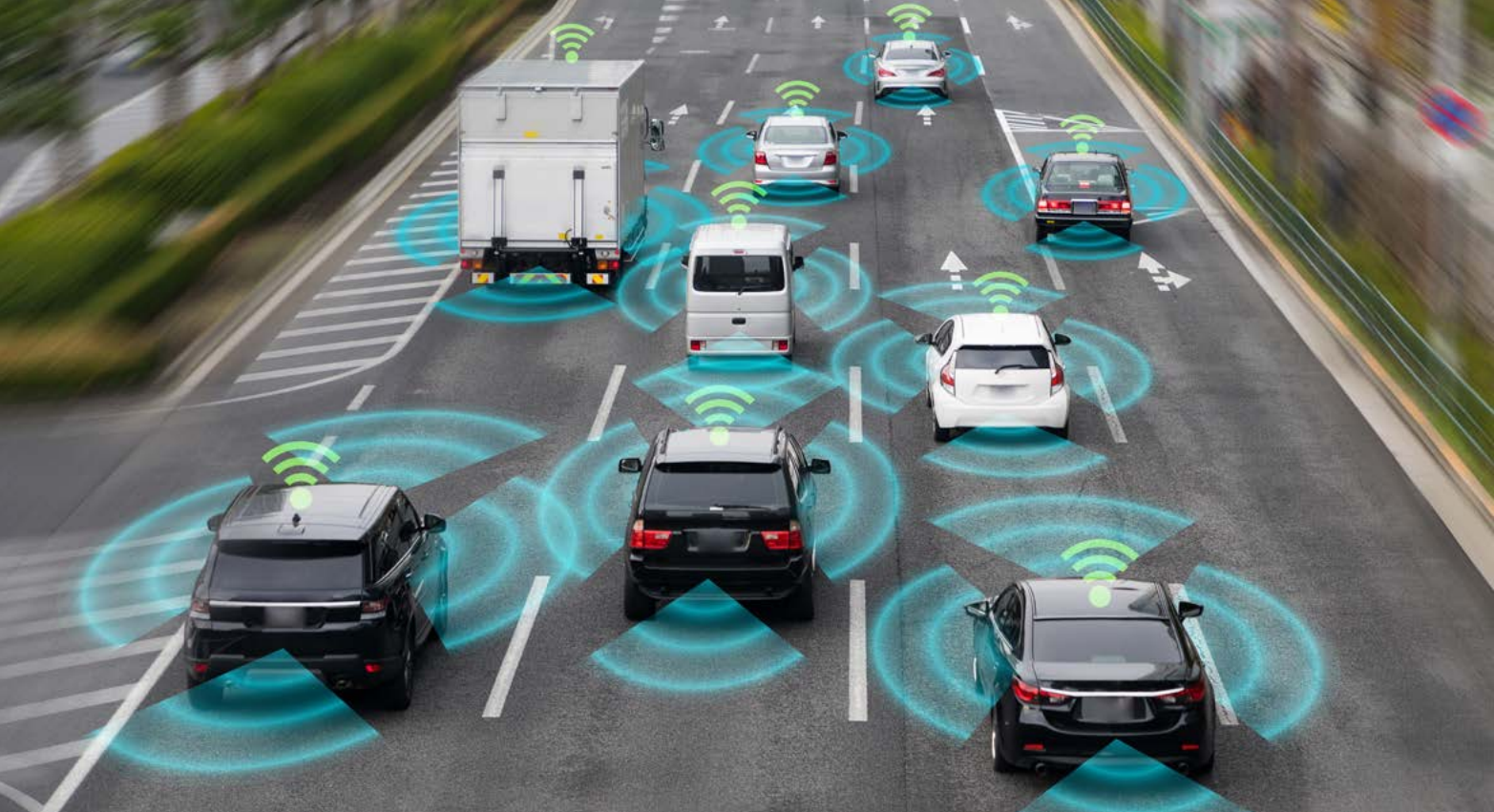


Modular Twisted-Pair Data Connectors for Ethernet Applications

MTD[®] Connector System

AUTOMOTIVE

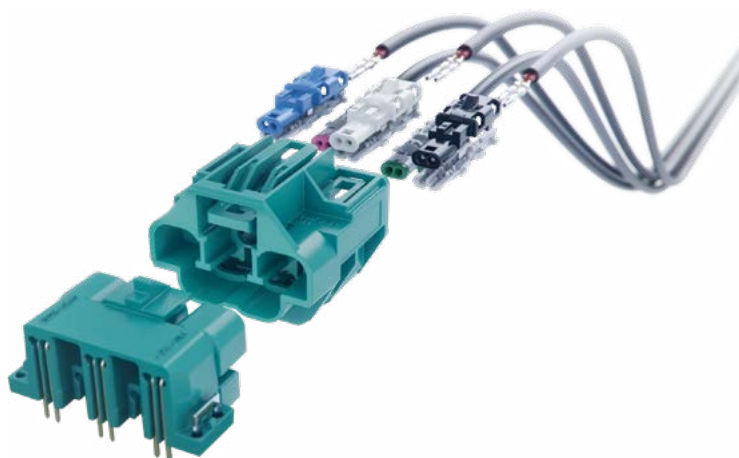




Overview

The Rosenberger MTD® connection system is an industry standard* Ethernet transmission system for optimized jacketed Twisted-Pair cables. Its excellent transmission and electrical performance, reduced weight, size and cost benefits have set new standards for 100 Mbps and 1 Gbps single connection Ethernet implementation in vehicles.

Compared to other solutions a key advantage of Rosenberger's connection system is the impedance-controlled transition area from cable to connector interface. Its small size in combination with several coding features allows multiple wire pairs to be placed in close proximity ensuring installation space is kept to a minimum. Furthermore, the honeycomb structure provides low crosstalk, good symmetry and can be extended modularly.



* MTD® fulfills channel requirements in terms of adaptation, symmetry and cross talk according to 100BASE-T1, 1000BASE-T1 (for 1-way connection), OPEN Alliance TC2 and BroadR-Reach® Spec 3.2.

Technical Data

MTD® Code E7




Electrical Data	
Impedance of connector including transition area to cable	100 Ω ± 10 Ω at 700 ps rise time
Frequency range	DC to 1.0 GHz
Ampacity	≤ 1.5 A DC
Contact resistance	≤ 10 mΩ
Mechanical Data	
Retention force latch	> 110 N
Retention force secondary lock to fix carrier	> 80 N
Coding efficiency single and double	> 80 N
Coding efficiency quint	> 110 N
Mating cycles	≥ 25
Environmental Data	
Temperature range	-40 °C to +105 °C
Thermal shock	According to DIN EN 60068-2-14
Temperature and humidity	According to US Car 2 – 4.5.6.2
Vibration (random)	According to DIN EN 60068-2-64
Mechanical shock	According to DIN EN 60068-2-27
High temperature exposure	According to DIN EN 60068-2-2

Product Features

- For modern automotive applications (100 Mbps and 1 Gbps for single connection)
- Connector system for optimized jacketed cables
- Cost optimized products
- Optimized in weight and installation space
- Elaborate and well designed for chip-to-chip applications
- Mechanically robust design
- Best conditions: manual, semi-automated and fully automated assembly process
- Standard round contacts applicable
- Radial free positionable contacts
- Stressless and torsion free contact assembling
- Fullfills requirements based on USCAR 2 standard

Product Portfolio

MTD® PCB Connectors Straight

Rosenberger No.	Description	Product
E7S12A-40MX5-y*	Plug single	
E7S13A-40MX5-y*	Plug single Special coding	
E7S10B-40MX5-y*	Plug double On request	
E7S14A-40MX5-y*	Plug single Waterproof	

* -y: please fill-in requested coding



MTD® PCB Connectors Right Angle

Rosenberger No.	Description	Product
E7S22A-40MX5-y*	Plug single	
E7S23A-40MX5-y*	Plug single Special coding	
E7S20L-400X5-y*	Plug single Long pins	
E7S21B-40MX5-y*	Plug double	
E7S21E-40MX5-y*	Plug quint	
E7S25L-40MX5-y*	Plug quint Long pins	
E7S20T-40MX5-y*	Plug double vertical for 10BASE-T1S Daisy-Chaining – only lower port populated	

* -y: please fill-in requested coding



MTD® Cable Connectors

Rosenberger No.	Description	Product
E7K11A-1AQX5-y*	Jack single	
E7K12A-1AQX5-y*	Jack single Special coding	
E7S11C-1AQX5-y*	Plug single	
E7S12C-1AQX5-y*	Plug single Special coding	
E7K10A-1AQX5-y*	Jack multiple Insert	
E7Z014-001-y*	Jack double Housing for E7K10A-1AQX5-y*	
E7Z004-001-y*	Jack quint Housing for E7K10A-1AQX5-y*	
E7S14C-1AQX5-y*	Plug straight Waterproof	
E7K14A-1AQX5-y*	Jack straight Waterproof	

* -y: please fill-in requested coding



MTD® Accessories and Adaptor

Rosenberger No.	Description	Product
E7C10T-900X5-y*	Double vertical 10BASE-T1S Daisy-Chain Adaptor	
E7Z033-000/50	Housing jack protection cap For single, double, quint	

* -y: please fill-in requested coding



Website

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

Rosenberger

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

Order No.

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