MATEnet
Modular and Scalable Connectors

Enabling Automotive
Ethernet

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Modular and Scalable Connectors
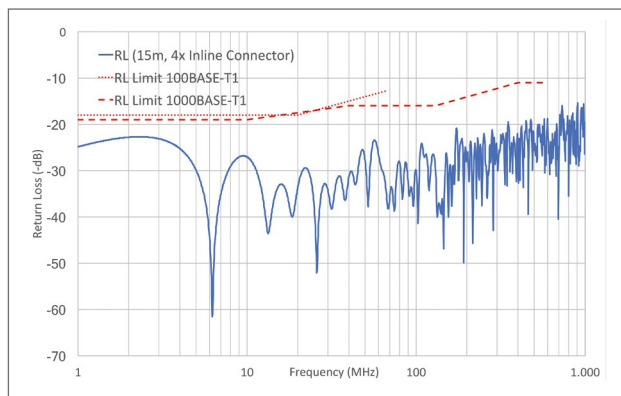Enabling Automotive Ethernet

TE Connectivity's (TE's) MATEnet modular and scalable connectors are designed for the harsh automotive environment and can transmit up to 1 Gbps according to IEEE 100BASE-T1 and 1000BASE-T1 Standards.

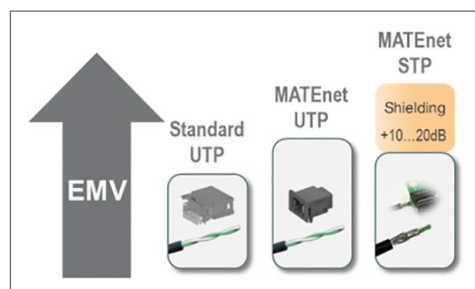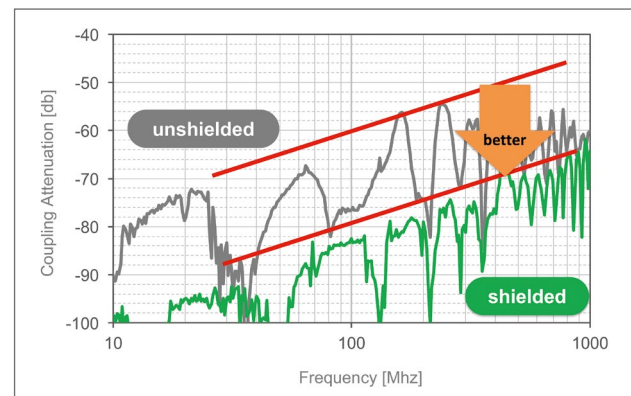TE Connectivity's MATEnet interconnection system contributes to modern E/E architectures and answers today's and tomorrow's requirements of vehicle connectivity. MATEnet was specifically developed for IEEE Automotive Ethernet networks and set a standard for unshielded cabling.

It relies on automotive-grade, miniaturized, robust and proven interconnection technology and has successfully passed severe testing and validation.

Signal integrity return loss

EMC mode conversion / coupling attenuation

Benefit

Automotive grade robustness:
• NanoMQS terminals system

Higher data-rate:
• Applicable for up to 1 Gbps (also potential for 6 Gbps with alternative technologies)

IEEE conformance:
• 100BASE-T1 (100Mbps - IEEE802.3bw and 1000BASE-T1 (1Gbps -IEEE802.3bp)
• Potentially up to 6 Gbps with alternative technologies

More flexibility:
• Compatible with Unshielded Twisted Pair (UTP) and Shielded Twisted Pair (STP)
• Cost efficient – design and process perfectly aligned for Automotive Ethernet needs
• Provides a modular and scalable solution that fits to automotive connectivity building blocks

Applications

• In-Vehicle Networks
• Advanced Driver Assistance Systems (ADAS)
• Radar / LIDAR Applications
• 360° surround view camera
• On-board diagnostic (V2X technologies)

Market Compatibility

• PoDL (Class 3 - 48 Volt)
• A2B
• HDBaseT

Portfolio 2018
Header and Frames

	Description	TE PN
	1 port Header	0-2304372-1/-2/-3*
	1 port Inliner Coupler	0-2302461-1/-2/-3*
	2 port Header	0-2305987-1/-2/-3*
	5 port Header	0-2305390-1/-2/-3*
	1 port sealed Header	0-1802162-1/-2/-3*
	1 port Frame UTP	0-2302454-1/-2/-3*
	1 port Frame STP	0-2302510-1/-2/-3*
	2 port Frame UTP	0-2305974-1/-2/-3*
	2 port Frame STP	0-2307961-1/-2/-3*
	5 port Frame UTP	0-2302455-1/-2/-3*
	5 port Frame STP	0-2302515-1/-2/-3*
	1 port sealed Frame UTP	0-1802105-1/-2/-3*
	1 port sealed Frame STP	0-1802113-1/-2/-3*

* xxx-1 Code A / xxx-2 Code B / xxx-3 Code C - further codings on request

Application Specification

Cable Assemblies and Components: 114-94431
Header: 114-94448

Product Specification: 108-94568
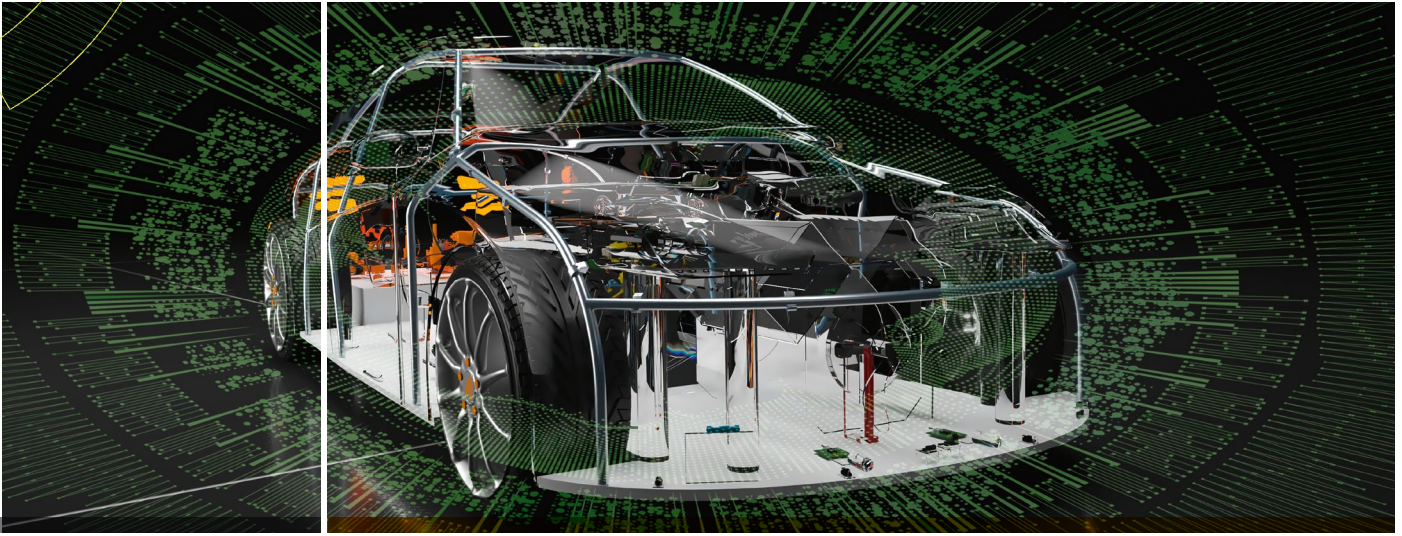
MATEnet Cable Assembly (UTP/STP)

Possible Configurations:
1 port Frame – 1 port Frame
1 port Frame – 1 port Inline Coupler
Female insert – Female insert
Female insert – Male insert

Available cable types: UTP 100 Mbps / UTP 1Gbps and STP 1Gbps

For further information please contact:
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