High-speed Communication Cable and Connector

Mass produced
Coaxial: since 2025
Under development
Differential: scheduled to be mass produced in 2028

High-speed communication cable for vehicle communication (ISO19642 compliance)

Standard connector for in-vehicle Ethernet and image transmission (USCAR, etc. compliance)

Background or Challenges

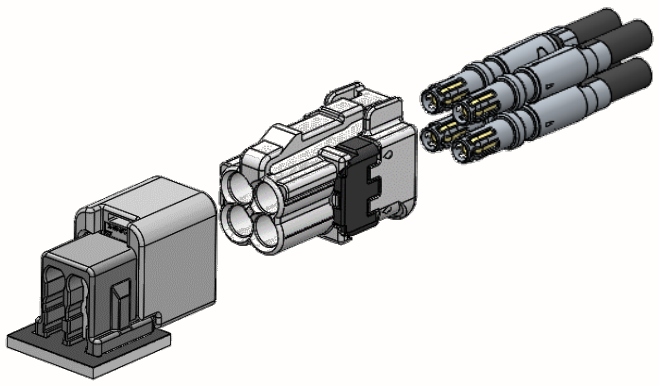
Acceleration of V2V, V2I, and V2X communication for driving assistance and emergency calls such as eCall in Europe
→ Needs high reliability cables and connectors for wide frequency

Solutions to Challenges or Features

1. High frequency: Supports coaxial 9GHz broadband, differential 5GHz broadband
2. High reliability: Maintains margin considering vehicle environments and manufacturing variations
3. High productivity: Easy assembly structure designed by a wire harness manufacturer

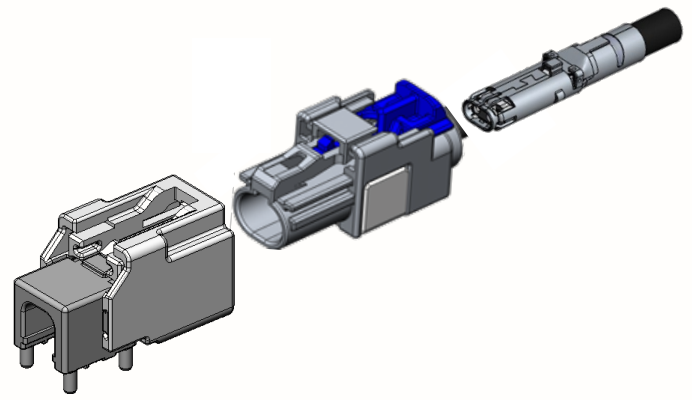
Main performance, specifications/stucture

Coaxial communication connector



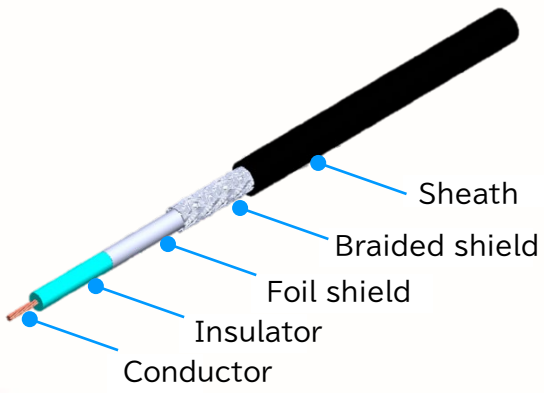
Characteristic impedance	50Ω
Connector standards	USCAR
Operating temperature range	-40°C to 105°C
PCB mounting	Through hole reflow
Applicable wire	1.5DS-PBP

Differential communication connector



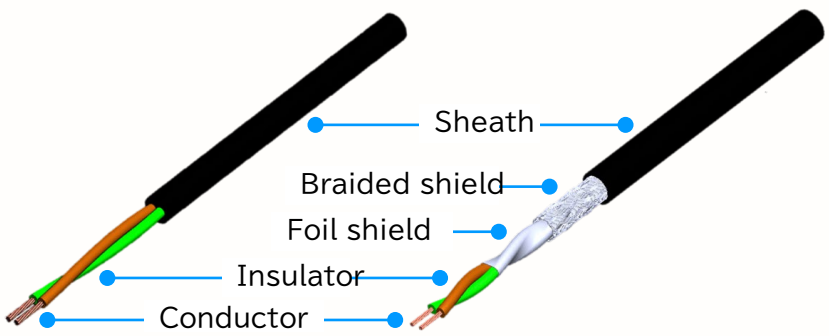
Characteristic impedance	100Ω
Connector standards	USCAR
Operating temperature range	-40°C to 105°C
PCB mounting	Through hole reflow/SMT
Applicable Wire	J-UTP/STP

Coaxial communication cable



Differential communication cable

【J-UTP】 【STP】



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