Anritsu Advancing beyond

Anritsu–Tektronix Solution for Automotive Ethernet Compliance

Overview

As vehicles adopt advanced ADAS and high-bandwidth infotainment systems, Automotive Ethernet (100BASE-T1/1000BASE-T1/MultiGBASE-T1) has become the backbone of in-vehicle networks.
Ensuring compliance of PHYs, cables, and connectors is critical for interoperability, signal integrity.

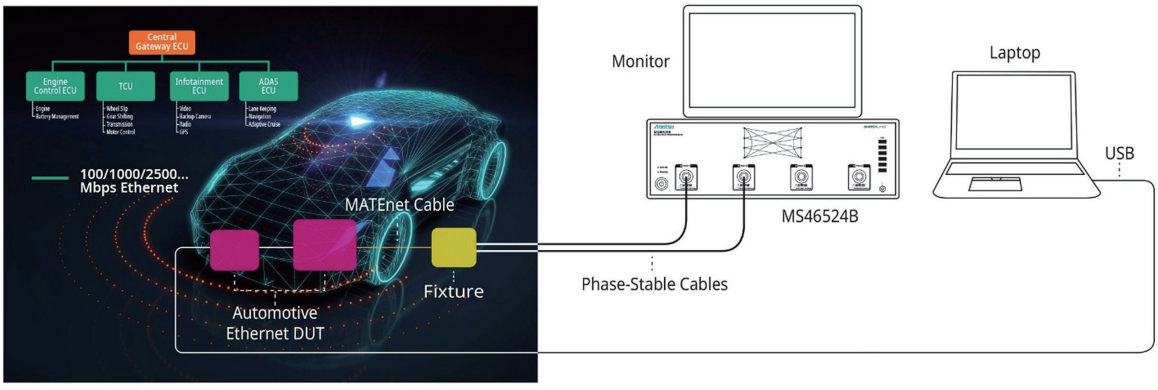
Why Automotive Ethernet Compliance Matters

Automotive Ethernet relies on differential signaling over single-pair cables. The IEEE 802.3 specifications define strict limits for:

- MDI Return Loss (RL): Ensures proper impedance matching and minimal reflections.
- Mode Conversion Loss: Ensures isolation between differential and common mode signals.

Anritsu + Tektronix Joint Solution

Anritsu's ShockLine™ Vector Network Analyzer MS46524B can provide precise S-parameters needed for Return Loss and Mode Conversion testing. Using these Anritsu measurements, Tektronix Series 6 Oscilloscopes can complete the full Open Alliance PMA TC8 validation with automated compliance results.



Conclusion

This integrated Anritsu-Tektronix workflow provides a complete, standards-aligned methodology for validating Automotive Ethernet MDI interfaces. The combined solution ensures precise measurement of Return Loss and Mode Conversion, enabling reliable compliance verification for 100BASE-T1 and 1000BASE-T1 systems.

ANRITSU CORPORATION
https://www.anritsu.com

公知 2025-11 ddcm No. In-Vehicle-Ethernet-E-L-2-(1.00)