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LIN - Testing and Analysing

Local Interconnect Network / J2602

LIN™ is a concept for low cost automotive networks, which complements the existing portfolio of automotive multiplex networks. LIN is a single-wire serial communication protocol based on the common SCI (UART) interface; which efficiently supports control of mechatronic nodes in distributed automotive applications.

The LIN standard includes the specification of the transmission protocol, the transmission medium, the interface between the development tools and the interfaces for software programming. LIN supports interoperability of network nodes from the viewpoint of hardware and software, and a predictable EMC behavior.

Since 2002 the C&S group is an Associated Member of the LIN Consortium and technical owner of the LIN conformance test specification. C&S participates continuously and intensively with several working groups like SAE J2602 Task Force, LIN 2.x Phy-CT & Prot-CT Work group, etc.. and has executed many Conformance Tests for LIN 1.x, 2.x, J2602-2 and customer specific derivatives of LIN during the past years.

C&S has been officially accredited as LIN Test House of the LIN Consortium (Accreditation Certificate). A list of tested LIN-devices may help the developing engineers.

The LIN Protocol Specification and the LIN Conformance Test Specification (only for members of the LIN Consortium) are available on the LIN webpage. Please contact the LIN Administration (www.lin-subbus.org).

SAE J2602 - Surface Vehicle Recommended Practice

The SAE J2602 covers the requirements for the SAE implementation based on LIN 2.0. The goal of SAE J2602 is to improve the interoperability and interchangeability of LIN devices within a network by resolving those LIN 2.0 requirements that are ambiguous, conflicting, or optional. Moreover, SAE J2602 provides additional requirements that are not present in LIN 2.0 (e.g., fault tolerant operation, network topology, etc.). The SAE J2602-1 (LIN Network for Vehicle Applications) has been issued in September 2005)

The SAE J2602-2 test specification (LIN Network for Vehicle Applications Conformance Test, issued in September 2005) is focused on integrated devices (ECU), and has no differentiation between Data Link Layer and Physical Layer.

C&S has worked out test plans for Stand-Alone-Transceivers and Data-Link-Layer devices based on the SAE J2602-2 test specification. Both test plans are approved by SAE and accepted by US car manufactures.

For further information regarding SAE J2602 please refer to the SAE International webpage www.sae.org