



AUTOMOTIVE IP

CAN & LIN

CAN-FD

designed in accordance to ISO 11898-1:2015
supports CAN 2.0B and CAN FD frames
ISO 16845-1: 2016 protocol conformance
test specification

LIN IP

conforms with LIN 1.3, LIN 2.1 and LIN 2.2A spec
AMBA-APB/AHB/AXI, Avalon, OPB Bus
ISO 17987-6:2016 protocol conformance
test specification

WWW.DCD-SEMI.COM



www.dcd-semi.com

when safety is a key:



AUTOMOTIVE

- DCD-SEMI design automotive IP Cores since 1999
- CAN, CAN-FD, CAN-XL, LIN are among them



CAN-FD

- The DCAN FD was designed in accordance with ISO 11898-1:2015 and conforms to: Bosch CAN 2.0B (2.0B Active) and CAN FD



LIN

- offers maximal efficiency and ultimate reliability, supports transmission speed between 1kb/s and 20kb/s



SAFETY

- DCD-Semi covers also FuSa segment
- proven IP Cores are developed as ISO26262 Safety Element out of Context (SEooC)



DCD-SEMI

- more than two decades of IT/IP market experience
- more than 70 different, complementary IPs

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OUR APPROACH



ASIL-B

The ASIL-B ready designs may be easily used in Automotive Safety Systems at the ASIL-B level, but DCD-Semi delivers also higher ASIL level ready IP.

For further information and the optional features please contact our support.

FailureMode_ID	Failure Modes (Functional)
FM_01	TX_FM1: No message transfer requested
FM_02	TX_FM2: message transferred requested
FM_03	TX_FM3: message transferred

FMEDA

The conducted safety analysis clearly confirmed that the safety metrics are fulfilled - both CAN and LIN IP cores reach the Automotive Safety Integrity Level ASIL-B (Single Point Fault Metric SPFM > 90%, Latent Fault Metric LFM > 60%).

DCD-Semi delivers complete FMEDA analysis with step by step instruction, to help with the integration of the IP, into the customer's system. The same it conducts the system level safety analysis.

PACKAGE

The customer's package includes the detailed Safety Manual covering all Assumptions of Use, the Failure Modes Effects and Detection Analysis with a step by step usage manual, all the safety concepts and requirements, safety plan, safety management description and tool evaluation reports. DCD-Semi offers also integration support.

$$\frac{\partial \bar{v}}{\partial t} + \nabla \cdot (\bar{v} \otimes \bar{v}) = -\nabla p + \mu \nabla^2 \bar{v}$$

$$\nabla \cdot \bar{v} = 0$$

$$\int_{\Omega_{el}} \bar{w} \cdot \bar{q} \, dV = \int_{\Omega_{el}} \bar{w} \cdot \nabla u \, dV$$

$$\int_{\Omega_{el}} \bar{w} \cdot \bar{q} \, dV = - \int_{\Omega_{el}} u \nabla \cdot \bar{w} \, dV + \int_{\partial \Omega_{el}} \hat{u}(\bar{n} \cdot \bar{w}) \, dS$$

$$\int_{\Omega_{el}} w \nabla \cdot \mathbf{F}_x \, dV$$

$$\int_{\Omega_{el}} w \nabla \cdot \mathbf{F}_x \, dV = - \int_{\Omega_{el}} \mathbf{F}_x \cdot \nabla w \, dV + \int_{\partial \Omega_{el}} w \hat{\mathbf{F}}_x \cdot \bar{n} \, dS$$



OUR COMPANY

DCD-SEMI

- MARKET EXPERIENCE SINCE 1999
- MORE THAN 750 000 000 ELECTRONIC DEVICES PRODUCED WITH DCD'S ELECTRONIC HEARTS
- WORLD'S FASTEST 8051 CPU & 70 DIFFERENT, COMPLEMENTARY ARCHITECTURES
- CRYPTONE - A 100% SECURE CRYPTOGRAPHIC SYSTEM
- BEST CFD SCIENTISTS WORKING HAND IN HAND WITH THE MOST EXPERIENCED ENGINEERS



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