General Features

The D429C MVB-to-CAN gateway is a powerful controller platform with two network interfaces MVB, CAN and a power supply. The D429C routes data from and to the CAN bus according to an application specific definition.

The TCN network management can be done by downloading application and configuration via MVB. It is easy programmable with duagon's software development kit.

The bus-to-bus propagation delay is in the range of some 100 µs. Therefore, it suits time-critical applications. The amount of data to be transferred is mainly limited by the architectural limits of the respective bus system.

The D429C comes with external code inputs to define the MVB addresses without reprogramming. This feature improves interchangeability when using multiple D429C on the same MVB system.

The D429C is directly powered from the vehicle battery (24 V up to 110 V).

The D429C is designed for harsh rolling stock environments and is fully compliant with the standards EN 50121 / EN 50155 / EN 61373 / EN 61375.

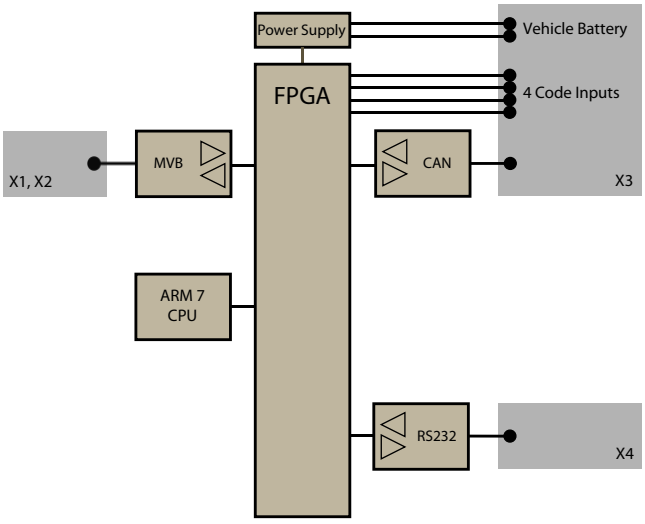
Key Benefits

- All ports on MVB and CAN, as well as the sink-source relationship, are freely programmable.
- Full featured MVB bus administrator.
- MVB ESD+ and EMD physical layer are available.
- CAN 2.0a and 2.0b protocol with up to 1 Mbaud is supported
- ARM7 processing unit with real time OS (eCos) and Flash file system for user application
- Stainless steel housing for mounting on DIN rail or by screws

Application Examples

- Connect devices using CAN protocol to an MVB bus.

D429C Hardware Architecture



Life Cycle Cost

The use of an FPGA with included duagon own soft-IP minimizes the risk and costs in case of component obsolescence. Data access and firmware updates are easily done through a service interface or directly via one of the available train buses. Further, to avoid service expenses, the Gateways have strictly been designed without the usage of electrolytic capacitors. Reference schematic and software examples help to speed up the integration time.

Technical Data

CPU base System	– ARM7 CPU running at 24MHz – 256 kB + 1MB RAM – Flash file system (2 MB)
MVB Interface	– MVB physical layers EMD or ESD+ – MVB according to IEC 61375 – Galvanic isolated
CAN Interface	– CAN controlled by FPGA – CAN 2.0a and 2.0b protocol – Galvanic isolated
Diagnostic/ Service	– RS232 interfaces – Galvanic isolated
Supply Voltage	– Direct from vehicle battery – LV: 24 V – 36 V nominal – HV: 48 V – 110 V nominal
Power Consumption	– <3.5W

Dimensions/ Weight	– 100 x 128 x 40 mm – 420g
Connector types	– 15-pin WAGO X-COM connector (Supply and CAN) – 9-pin D-SUB (MVB)
Operating Conditions	– Ambient temperature surrounding the device: –40 to +70°C (EN 50155, class OT4) – Relative humidity: 75%, max. 95% for 30 days per year (conformal coating) according to EN 60068 – Shock and vibration: According to IEC 61373 category 1, class B – EMI: According to EN 50121 and EN 50155
Environment	– Fully compliant with RoHS and REACH – 100% 23h cyclic climatic testing

d-001046-059334

Ordering Information

Product: **D429C** . **T** - **HV**

MVB Function	
SERVER + BA	
MDFULL without BA	L

MVB Type: (X1, X2)	
EMD	T
ESD+	D

Power Supply	
48-110 Vdc	HV
24-36 Vdc	LV

Example:
D429C.T-HV[1]

[1] default ordering options

Related Documents

Data Sheet D429C D429C_D429X_DS.pdf
Product Ordering Guide order_ug.pdf

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