YAMAR
Product overview

DCAN500 - CAN over Powerline Communication

The information in this data sheet is preliminary and may be changed without notice.

General

The DCAN500 is a transceiver for CAN messages transfer over noisy DC power Line at bit rates up to 500Kbps, eliminating the traditional CAN twisted pair data wires and the CAN transceiver IC saving weight and simplify CAN network installation.
The DCAN500 operates as a new DC power line CAN physical layer for network communication between ECUs.

The DCAN500 uses the DC-BUS™ technology for communicating in hostile impulse noise environment. The DCAN500 operates at user selectable carrier frequencies between 5MHz and 30MHz at bitrates up to 500 Kbit/s. The device receives and transmits CAN 2.0A/B protocol messages, performs the arbitration over the powerline based on the CAN identifier's LSB 11 bits. The CAN message is error protected; QPSK modulated with low voltage narrow band carrier.

The DCAN500 is implemented in 32 pin QFN 5x5mm package. The device couples to the DC line via capacitor; eliminating the need for high voltage process used by ordinary CAN transceivers.

Main Features

- CAN *A/B communication over DC powerline*
- *Bit rates of up to 500Kbps*
- *User select the carrier frequency between 5MHz and 30MHz*
- *Multiple CAN networks can operate simultaneously on different carriers.*
- *Built-in modem, and error protection*
- *Multiplex CSMA/CA arbitration mechanism*
- *Sleep mode for low power consumption*

Main Benefits

- *Eliminates complex harness*
- *Reduces weight and installation time*
- *Robust to power line noises*
- *Increase reliability*
- *Allows flexible network designs*
- *Low cost CMOS Implementation*

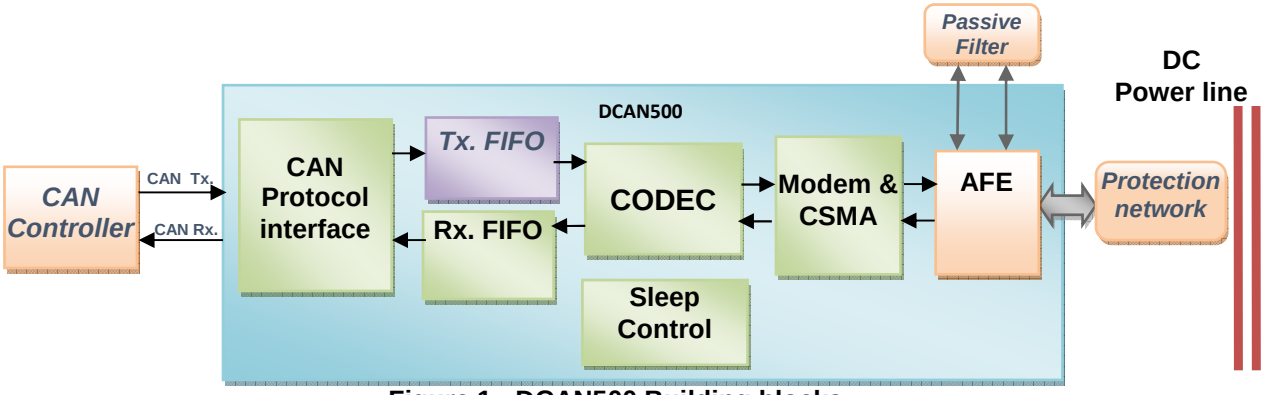

Figure 1 - DCAN500 Building blocks

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