YAMAR Electronics Ltd.
Product Overview

DCAN250 - CAN over Powerline Communication

This information is preliminary and may be changed without notice.

1. General

The DCAN250 was designed to transfer CAN messages over noisy DC Power Line using the DC-BUS™ technology. It enables a new physical layer of CAN network for communication between electronic modules sharing a common DC power supply line. It avoids complex cabling, saves weight and simplifies installation.
The device receives and transmits CAN2.0A protocol messages. The arbitration over the DC line is based on the CAN message Identifier's 11 bits. The data is error protected; QPSK modulated using low voltage narrow band carrier, eliminating the EMC generated by the "square wave" CAN data lines.
The DCAN250 is implemented in small CMOS digital process allowing integration with other CMOS IP such as micro-controllers. The DCAN250 is coupled to the DC line via capacitor, thus, there is no need for high voltage process such as needed by ordinary CAN transceivers.

This innovative solution allows low cost overall CAN implementation, combining power and data over the same cable, withstanding the hostile DC lines impulse noises.

Features

- CAN *A protocol Communication over DC power line*
- *Bit rates of up to 250Kbps*
- *Built-in Modem, Error Correction and Synchronization*
- *Multiplex CSMA/CA arbitration mechanism*
- *Sleep mode for low power consumption*

Benefits

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

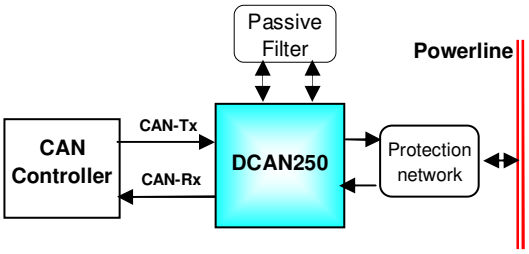

Figure 1 - DCAN250 Interface

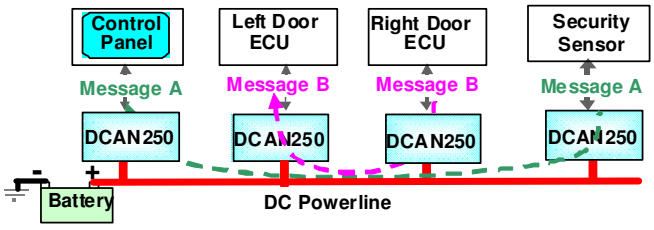

Figure 2 - DCAN250 network example

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