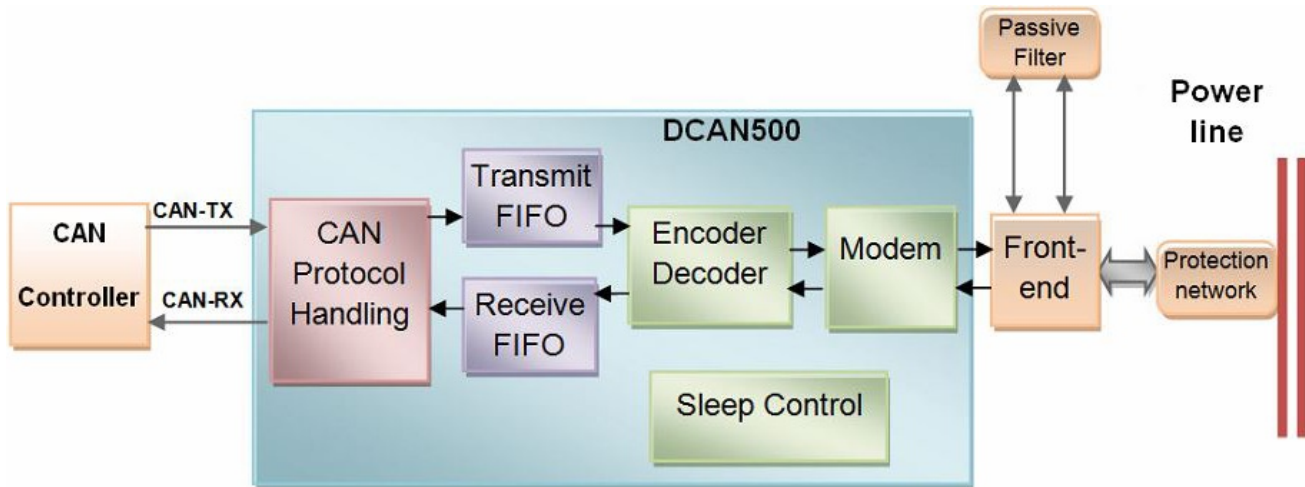


TRANSCIEVER

CAN over Powerline

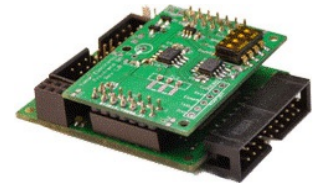
The DCAN500 transceiver by Yamar (Israel) is designed to transfer CAN messages over the DC power-lines.



DCAN500 internal function blocks (Photo: Yamar)

The DCAN500 transceiver enables a physical transmission of CAN messages on the DC power supply lines. This simplifies the cabling and reduces weight. The CAN powerline transceiver supports both message formats: base frame format using 11-bit IDs and extended frame format with 29-bit IDs.

The bits are QPSK modulated using a low voltage narrow band carrier, eliminating the EMC generated by the "square wave" of the normal CAN data lines. The arbitration function over the DC line is the same as specified in ISO 11898. The data is error protected to ensure a proper encoding and decoding. The DCAN500 is implemented in CMOS allowing integration with other CMOS IP such as micro-controllers. The transceiver is coupled to the DC line by means of capacitors. Thus, there is no need for high-voltage process such as needed by ordinary CAN transceivers, said the company. This solution allows low-cost overall CAN implementation, combining power and data over the same cable, withstanding the hostile DC lines impulse noises, the company added.



The DCAN500 evaluation board (Photo: Yamar)

[CW](#)