



DCB1M – UART/SPI/ I²C over Powerline Communication

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

The DCB1M is a CSMA/CA multiplex transceiver for data communication over noisy DC power lines such as in vehicles, at speeds of up to 1.4Mbps. It eliminates complex cables, saves weight and simplifies installation.

The data messages can have unlimited length. Each message is error protected and QPSK modulated with user-selectable narrow band carrier frequency between 5MHz and 30MHz. The device supports UART, SPI, I²C communication protocols and performs arbitration over the powerline.

The DCB1M small size silicon CMOS digital process and implemented in a QFN 32 pin 5x5mm package. A single capacitor couples the device to the DC power line, eliminating the need for high voltage CMOS process.

Main Features

- SPI/UART/I²C Communication over DC power line
- Bit rates of up to 1.4Mbps
- Selectable carriers between 5MHz and 30MHz
- Multiple networks can operate simultaneously over different carrier frequencies
- Multiplex CSMA/CA arbitration mechanism
- Sleep mode for low power consumption
- Built-in Modem, Error Correction & Synchronization

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

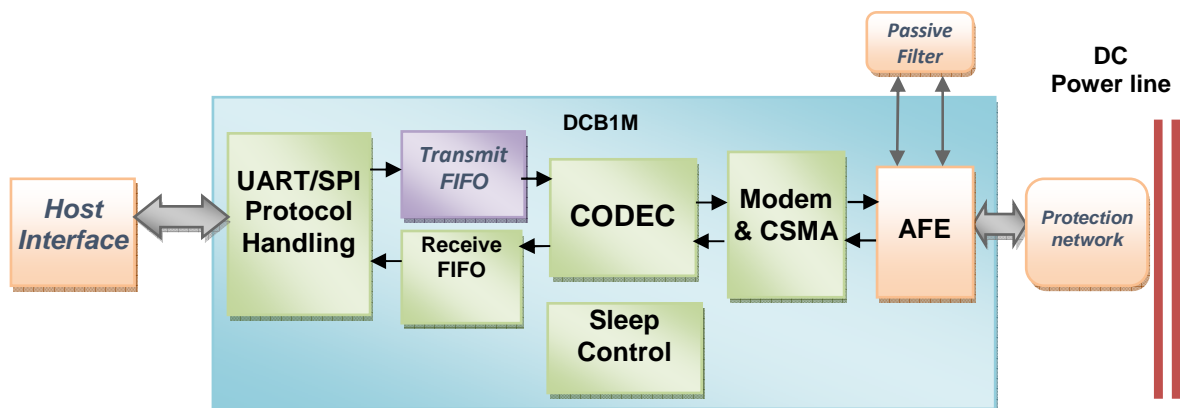


Figure 1 - DCB1M Building blocks