YAMAR Electronics Ltd.
Preliminary Information

SIG40 – LIN / UART Over Battery Power Lines

Description

The SIG40 is an innovative VLSI for digital communication over a single wire or a battery-powered line for asynchronous LIN and UART protocols, using original multiplex digital signaling technology. It provides a new economical and safe physical communication layer for asynchronous protocols.
Since the SIG40 deploys CMOS technology, it can be economically integrated within other CMOS devices such as micro controllers.

When used as a LIN network over powerline, the SIG40 replaces the LIN transceiver and the LIN Data wire. Its 57.6kbps data rate triples the LIN transfer rate. The SIG40 saves node costs and increases the network capacity. A sleep mode enables power saving. Wakeup messages on the DC line awaken remote devices as required by the LIN protocol.

The SIG40 can be used as a new physical layer over the powerline for the LIN protocol and is useful for a wide range of Automotive, Avionics, Industrial applications such as sensor readings, actuator activation, doors, seats, mirrors, climate control, lights etc. The SIG40 contains a host and LIN interface, modem, line driver and ceramic filter interface.

The modem consists of algorithms to overcome the hostile communication conditions of a vehicle's battery line.

Applications

- **Vehicle sub-bus**
- **Door Control**
- **Climate Control**
- **Light Control**
- **Sound Control**
- **Entertainment Control**
- **Mobile Computing**
- **Mobile Phone Interface**
- **Security Monitoring**

Features

- **Noise robust.**
- **Eliminates data wire and transceiver.**
- **Selectable bit rate between 19.2 Kbps to 57.6 Kbps.**
- **LIN and UART communication protocol over battery-powered line.**
- **Operates on battery lines up to 36V .**
- **Two selectable carrier frequencies.**
- **Built-in slave synchronization.**
- **Peer-to-peer, up to 16 devices, multi-user packet communication.**
- **Sleep Mode for low power consumption.**

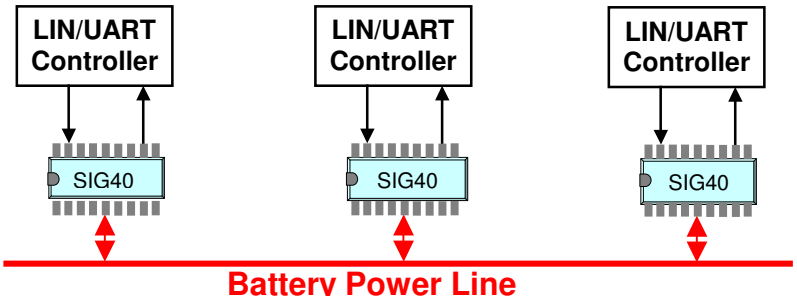

Figure 1 - Typical SIG40 Network

YAMAR Electronics Ltd.
17 Shimon Hatarsi St. Tel Aviv, 62492 Israel
Tel: +972-3-5445294 Fax: +972-3-5445279
Email: marketing@yamar.com Web: www.yamar.com