M405 – LIN Interface

Block Diagram
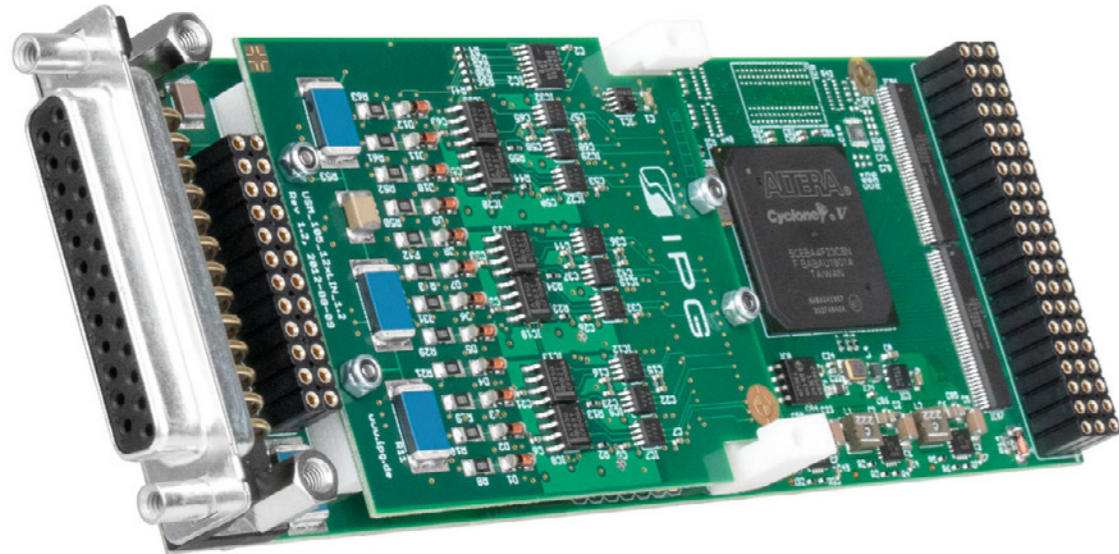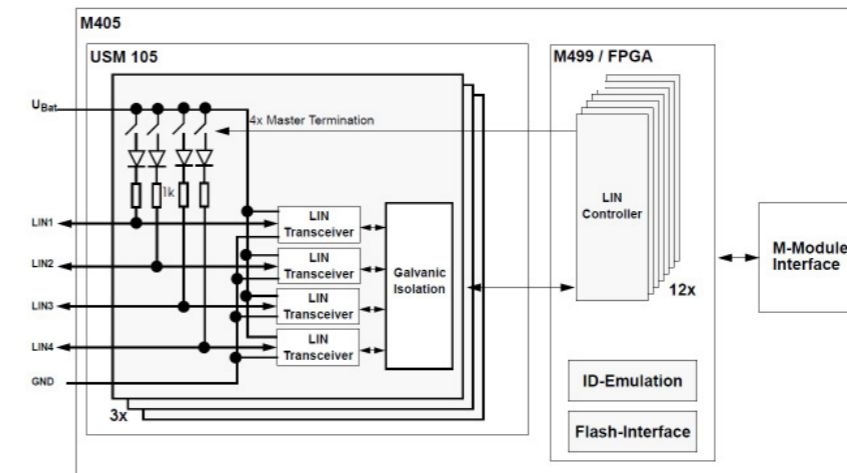

Features

- 12 independent LIN channels
- Supports LIN specification 1.3, 2.0 and 2.1
- Up to 16 slaves per channel
- All channels are individually configurable as master or slave
- 30kOhms slave termination resistor
- Additional bus termination resistor for master (1kOhm) can be switched on by software
- Baud rate range: 2.4kBaud .. 20kBaud
- LIN channels are galvanically isolated against system supply
- Usable for LIN bus voltages up to 30V
- Special trace mode available for bus traces
- Each 4 channels are grouped and are galvanically isolated against each other group

Use Cases

- Simulating LIN nodes like HMI components, window servos, seatbelt tighteners
- Controlling actuators like servos of advanced front-lighting systems
- Aquiring user inputs from e.g. steering wheel buttons

Technical Data

LIN channels	• 12 channels, arranged to 3 groups with 4 channels each • 16 slaves per channel supported • Each group is galvanically isolated against each other
Number of bytes per message	8 (Tx-message), 16 (Rx-message)
Baud rate	2.4 .. 20kBaud [a]
Supported LIN specification versions	1.3, 2.0 and 2.1, configurable per software
Features	• Each channel configurable as master or slave node • Master termination switchable • Wake-up capability • Unpowered nodes do not disturb the network
Output stage supply voltage	7..27V, reverse voltage protected
Overvoltage protection	-40V .. +40V
Supply current	• 30mA per group (all channels slave mode) • 80mA per group (all channels master mode, 12V Operation)
Address space	• A08D16 or A24D32 • Recommended: Use A24D32 for faster access times.
Available connectors	25 Pin SubD connector, female

[a]. An assembly variant with baudrates down to 1kBaud is available on request.

Order Information

Order Number	IO-M405

Alternatives

M410	For CAN FD communication interfaces
M406	For PSI5 communication interfaces
M407	For SPI based sensor emulations
M414	For SENT communication interfaces