

# Product Information

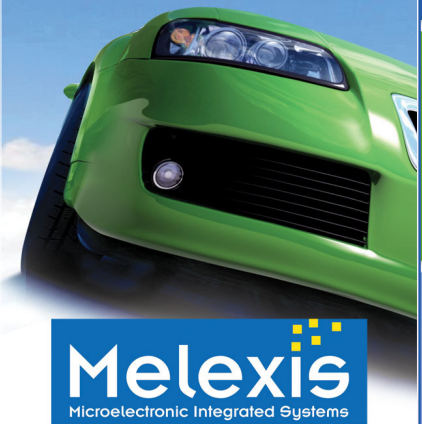
## MLX80104/5

### LIN Switch Slave



This IC is a fully integrated LIN Slave for matrix switch or single switch Applications in automotive environment. It is suitable for bus systems according to LIN 2.x as well as SAE J2602.

The combination of physical layer LIN transceiver and LIN protocol controller in combination with easy to configure switch inputs and PWM outputs make it possible to develop in a short timeframe simple, but powerful and cheap switch slave nodes for LIN Bus systems.



## Features

### LIN Protocol Controller according to LIN 2.x and SAE J2602

- Baudrate up to 19.2 kBaud
- Internal RC-Oscillator
- MULAN MCU with 16kB ROM/OTP, 512 Byte RAM, 192 Byte EEPROM with ECC)

### LIN Transceiver according to LIN 2.x and SAE J2602

- Slew rate control for best EME behavior
- High EMI immunity

### IO Configuration

- 18 fully configurable high current/high voltage inputs/outputs (8mA/26.5V)
- Groundshift tolerant I/Os
- All IOs configurable pull up or pull down characteristics
- Eight PWM outputs (8-bit, 40Hz to 45kHz)
- Ten 10-bit ADC channels
- Eight Interrupt capable Inputs
- Configurable Wake up sources (LIN, IOs, ADC)
- Constant current output (2mA) for additional external low voltage loads via bipolar transistor
- IOs fully diagnosable
- Two stage watchdog system: window watchdog and additional independent analog watchdog

### Voltage Regulator

- Direct powered from 12V board net
- Low standby current consumption of typ 10µA (max 20 µA) in sleep mode
- Over-temperature shutdown
- 45V load dump protected

### Other Features

- Automotive Temperature Range of -40°C to 125°C
- Small MLPQ 5x5 28pin package

Bus ICs

BLDC Motor  
Control ICs

Pressure Sensors

Wireless ICs

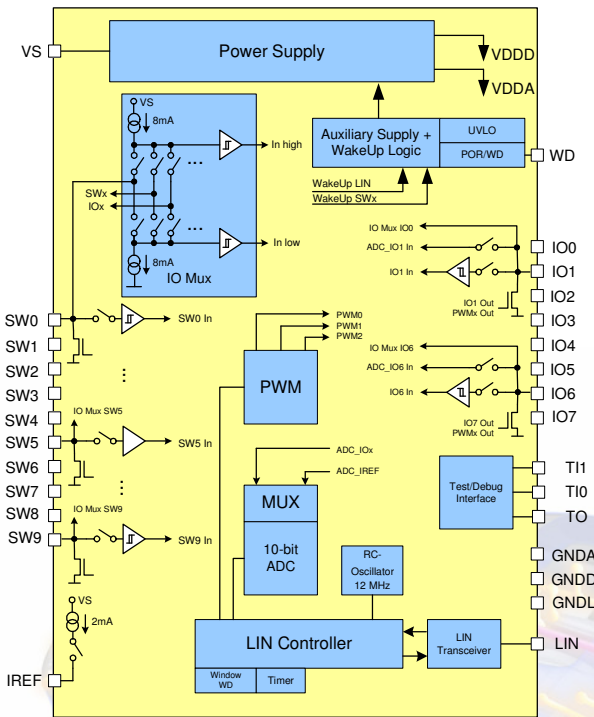
Hall Effect ICs  
And Sensors

Optoelectronic  
Sensors

Sensor Interface ICs

Infrared Sensors

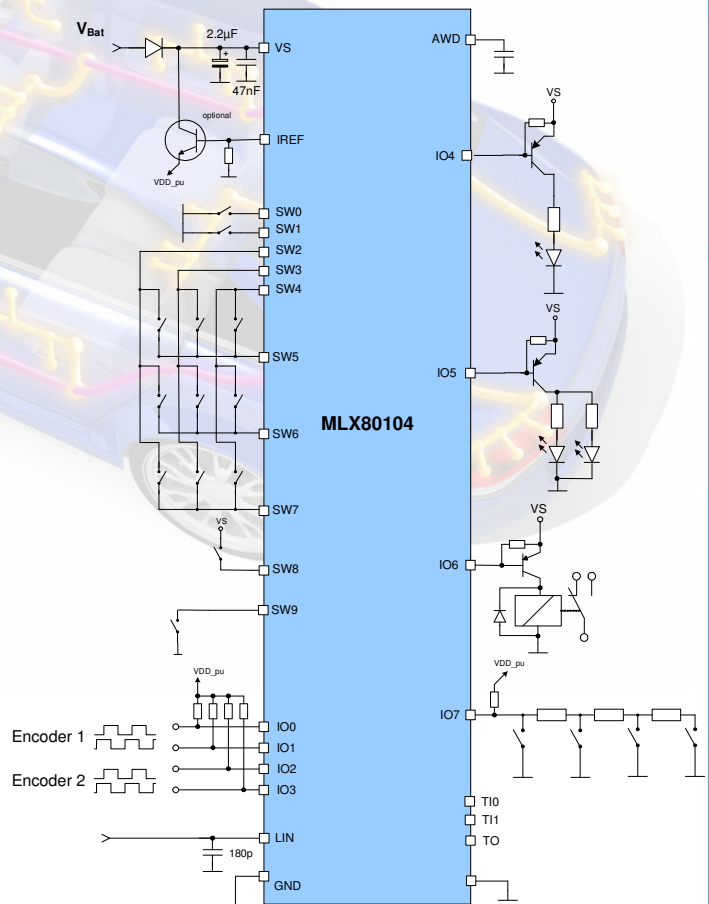
# Block Diagram



# Applications

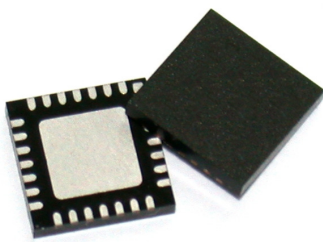
- Steering wheel switches
- Seat and Window switches
- Headlights rotary switch
- Dashboard switches , ...
- Seat Heating
- ...

# Easy Application configuration



# Small Package

MLF 5x5 28 pins



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- Bus ICs
- BLDC Motor Control ICs
- Pressure Sensors
- Wireless ICs
- Hall Effect ICs And Sensors
- Optoelectronic Sensors
- Sensor Interface ICs
- Infrared Sensors