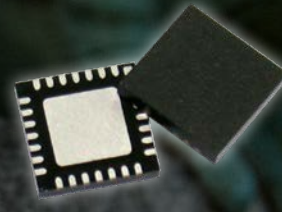


MLX80104/5

LIN CONTROLLER IC

UNIVERSAL



Chameleons are famous for their quick skin color-changing abilities. They change color in response to environmental changes. We therefore link these wonderful creatures to our LIN RGB products which enable changing ambient light according to the car driver's preference.

## LIN COMMUNICATION BASED IO CONTROL

### MLX80104/5

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.

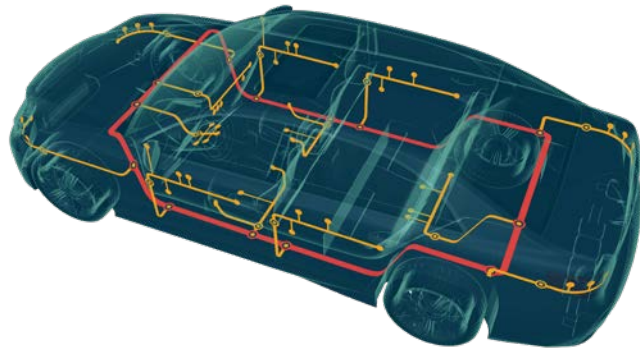
The combination of physical layer LIN transceiver and LIN protocol controller in combination with easy to configure switch inputs and PWM outputs make it possible to develop in a short timeframe simple, but powerful and cheap switch slave nodes for LIN Bus systems.

### FEATURES

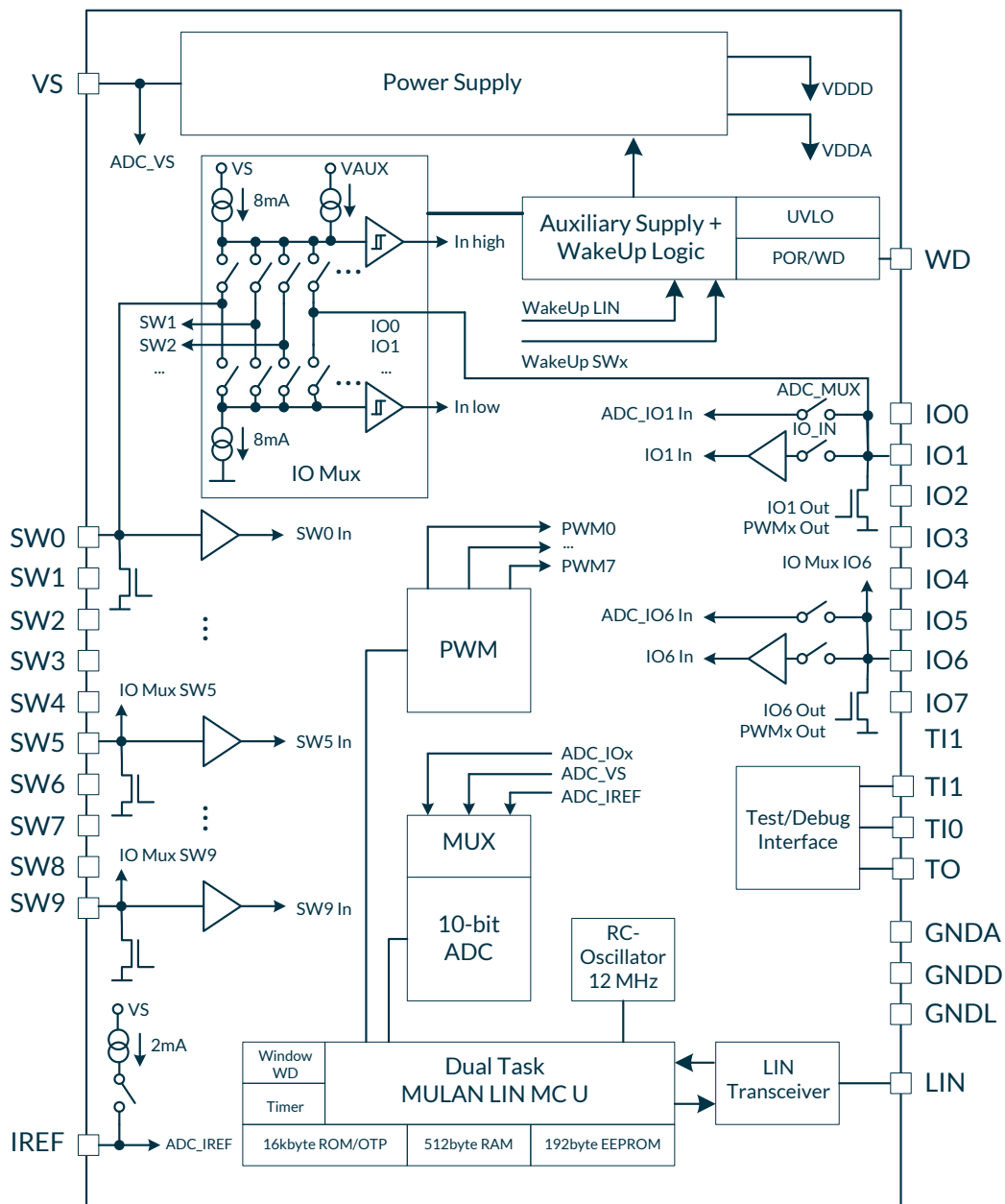
- ✓ LIN Protocol Controller according to LIN 2.x and SAE J2602
  - Baudrate up to 19.2 kBaud
  - Internal RC-Oscillator
  - MULAN MCU with 16kB ROM/OTP, 512 Byte RAM, 192 Byte EEPROM with ECC
- ✓ LIN Transceiver according to LIN 2.x and SAE J2602
  - Slew rate control for best EME behavior
  - High EMI 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 10=A (max 20 =A) 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

# APPLICATIONS

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



# BLOCK DIAGRAM



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