



## MLX16201 Intelligent HV automotive relay driver (ROM-Version)

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The MLX16201 is a multiple purpose intelligent relay driver ASIC designed for automotive applications. It uses the RX16000-16 Bit parallel  $\mu$ C of Melexis. Integrated analog and digital features allow ease of design for various automotive applications using minimal external components. 10 different interrupts allow real time events, 4 of which are accessible via the external pins. The circuit is load-dump protected for a 80V load dump pulse.

Availability:

The MLX16201 is in production.

### Features and Benefits

- WORD(16 Bit), BYTE(8 Bit), and BIT(1Bit) Operations possible
- 11 different user interrupt sources (including RESET)
- 8k\*8 user ROM
- 256\*8 RAM
- 128\*16 EEPROM
- 1 On-Chip-Timer
- 1 Timer-Capture-Register (16 bits)
- 2 Timer-Compare-Register (16 bits)
- Window Watchdog (5ms/10ms)
- 1 PWM output 20.8 kHz, 7-Bit +1 (duty cycle from 0 to 100%)
- 1 A/D converter (8 bits, 16 $\mu$ s) internal and external reference possible
- 8 ADC-channels analogue multiplexer
- On-Chip Temperature Sensor
- 2 Relay driver outputs, integrated free wheel function
- 2 voltage outputs for driving external circuitry
- 8 bi-directional ports with different possible thresholds, 5V output function
- 2 Interrupt inputs for timer capture
- On-Chip 8-MHz Oscillator (No external components)
- 4V to 26V voltage range, 80V load dump protected,
- Typical 150  $\mu$ A sleep mode current
- Small SO20 package
- Development Environment available:
  - \* MLX10108 OTP version in SO24, pin- and parameter compatible for SW trials
  - \* RX16000 CPU-Simulator
  - \* Assembler, Linker, Object-File-, HEX-File-Generator
  - \* C-Compiler, distributed by COSMIC
  - \* Melexis Emulator E-MLX, which contains:
    - - ROM-Emulator
    - - In-Circuit-Emulator
  - \* Emulator board
  - \* Demo application board incl. Demo SW
  - \* OTP programmer incl. MLX10108 interface board

### MLX16201 Assets



