



# TLE983x System-on-Chip

## Smart LIN-based Relay Driver IC & Switch Panel Interface with integrated 8-bit MCU

The TLE983x is a single chip solution that integrates a high performance 8-bit microcontroller derived from the established XC800 family with application specific power drivers, control and communication modules in an automotive qualified new Smart-Power Technology.

The TLE983x family concept offers scalability in terms of Flash memory sizes ranging from 36kB to 64kB with pin-compatible devices.

The TLE983x family was specifically designed to fit to a wide range of LIN-slave applications where a small package form factor and a minimum number of external components is essential.

### Targeted Automotive Applications

- Window Lift
- Power Seats
- Sun Roof
- Fan/Blower Control
- Key Pad Interface
- Switch Panel Interface

### Key Features

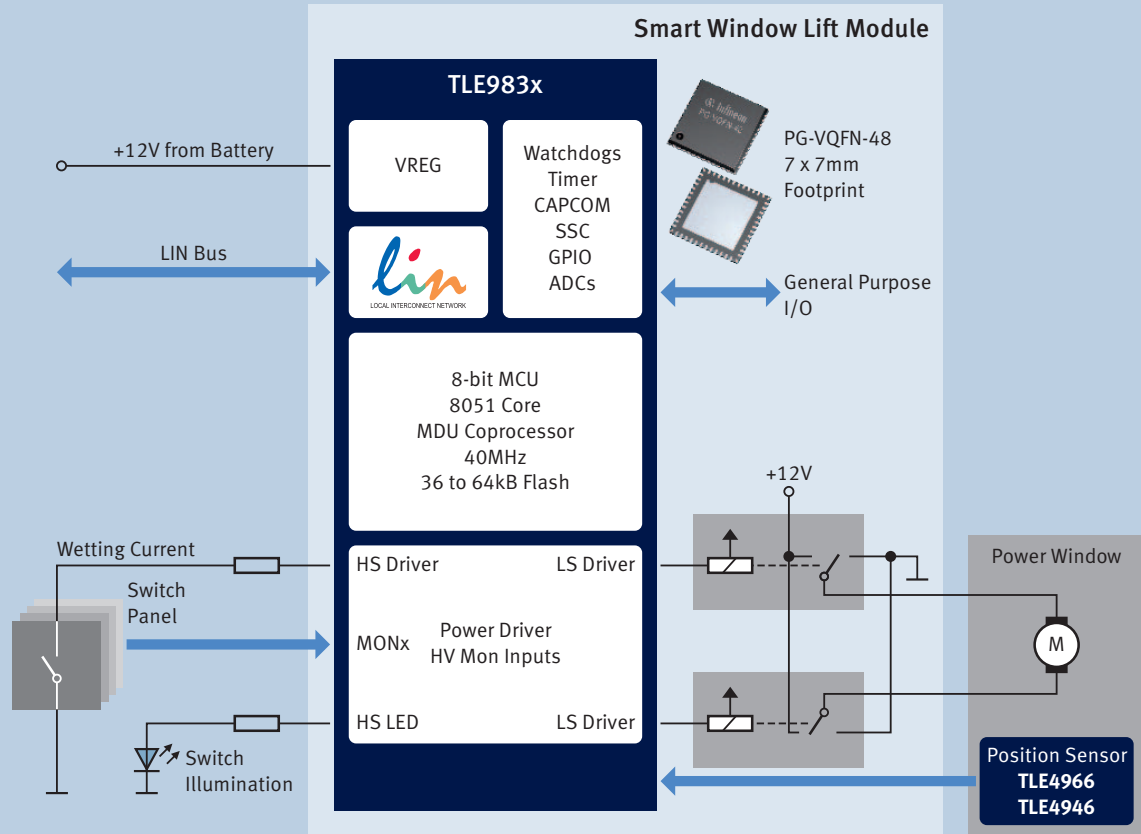
- 8051-based MCU @40MHz
- 36 to 64kB Flash memory
- 4kB EEPROM emulation
- On-chip debug interface (2-wire)
- LIN Transceiver compliant with LIN standards 1.3, 2.0, 2.1 and SAE J2602 – supports fast programming via LIN
- Voltage Regulator for supply of internal and external circuits (5V)
- High-Side & Low-Side Switches with PWM capability
- Integrated measurement interface for monitoring battery voltage and chip temperature
- 10-bit ADC converter
- CAPCOM6 for ext. motor control

### Key Benefits

- Complete system-on-chip (SoC) for ECU's that communicate via LIN interface with main ECU
- High-voltage monitoring inputs for off-board switch control
- Highly flexible SoC through dedicated configuration registers for e.g. current and voltage settings as well as power saving modes
- High pin-count VQFN package with 7×7mm footprint enables space saving PCB designs

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## Smart Window Lift Module



## Product Summary

Product P/N	Flash [kB]	Frequency [MHz]	HSS	HV MON	GPIO	OP-AMP	PN MOS DRV
TLE9835QX	64	40	2	5	11	Yes	Yes
TLE9834QX	64	40	2	5	11	No	No
TLE9833QX	48	40	2	5	11	No	No
TLE9832-2QX	36	40	2	5	11	No	No
TLE9832-2QV	36	40	2	5	11	No	No
TLE9832QX	36	40	1	5	11	No	No
TLE9832QV	36	40	1	5	11	No	No
TLE9831QV	36	40	1	5	5	No	No

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