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Embedded - Microcontrollers - Application Specific: Tailored Solutions for Precision and Performance

Embedded - Microcontrollers - Application Specific represents a category of microcontrollers designed with unique features and capabilities tailored to specific application needs. Unlike general-purpose microcontrollers, application-specific microcontrollers are optimized for particular tasks, offering enhanced performance, efficiency, and functionality to meet the demands of specialized applications.

What Are Embedded - Microcontrollers - Application Specific?

Application specific microcontrollers are engineered to

Details

Product Status	Obsolete
Applications	Automotive
Core Processor	XC800
Program Memory Type	FLASH (36kB)
Controller Series	-
RAM Size	3.25K x 8
Interface	LIN, SSI, UART
Number of I/O	11
Voltage - Supply	3V ~ 27V
Operating Temperature	-40°C ~ 150°C (TJ)
Mounting Type	Surface Mount
Package / Case	48-VFQFN Exposed Pad
Supplier Device Package	PG-VQFN-48-31
Purchase URL	https://www.e-xfl.com/product-detail/infineon-technologies/tle9832-2qx



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

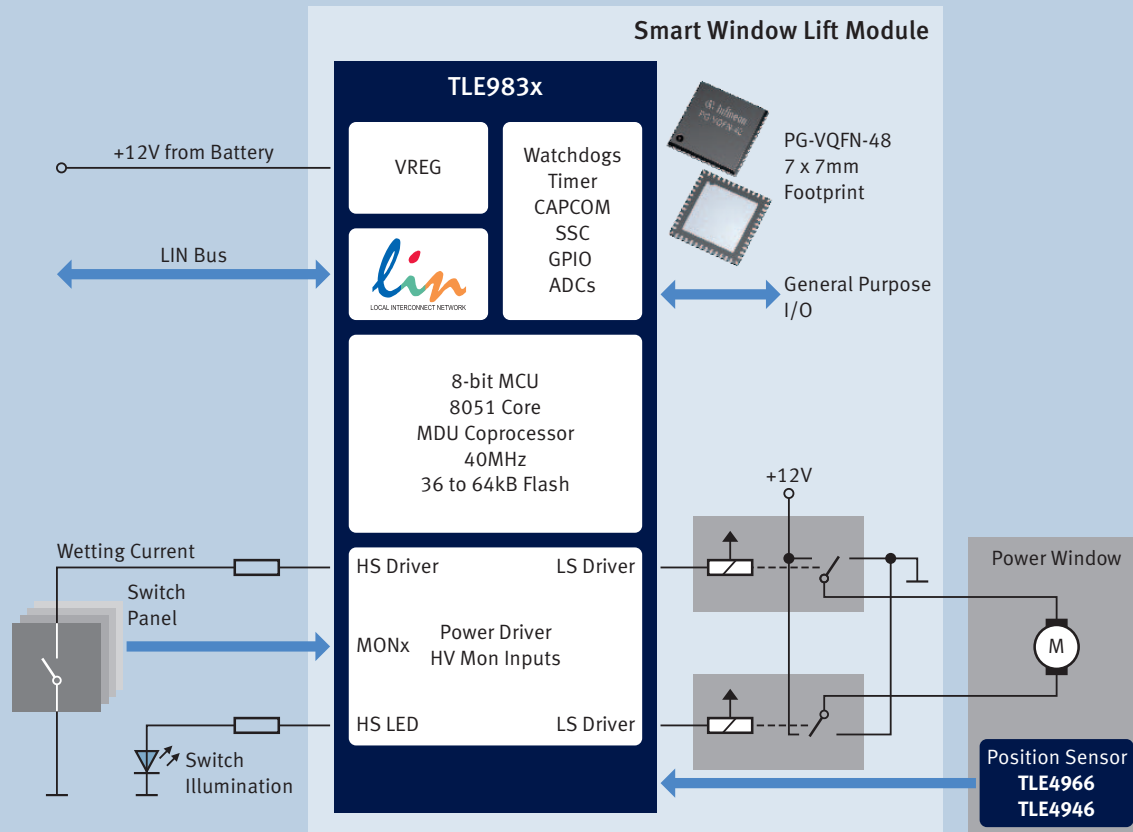
- 8051-based MCU @40MHz
- 36 to 64kB Flash memory
- 4kB EEPROM emulation
- On-chip debug interface (2-wire)
- LIN Transceiver compliant with LIN standards 1.3, 2.0, 2.1 and SAE J2602 – supports fast programming via LIN
- Voltage Regulator for supply of internal and external circuits (5V)
- High-Side & 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

TLE983x System-on-Chip

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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