

OKI Semiconductor

FEDL9620-01

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ML9620

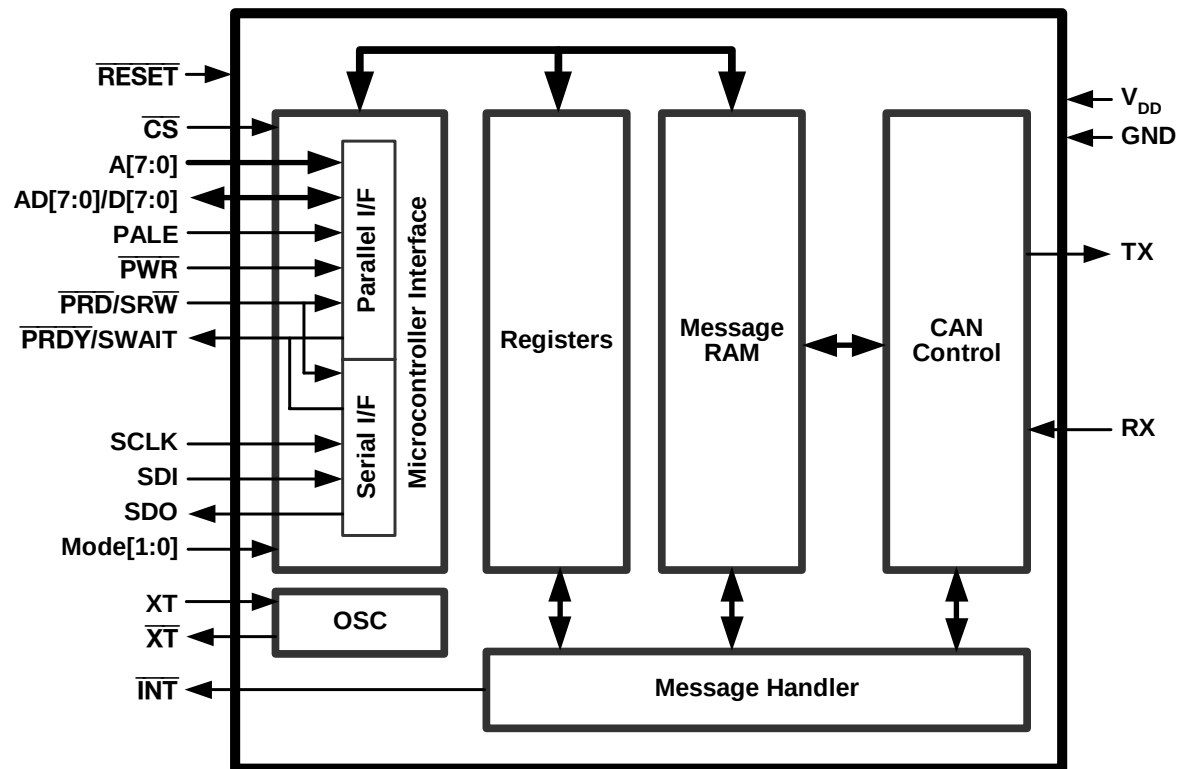
CAN Controller IC

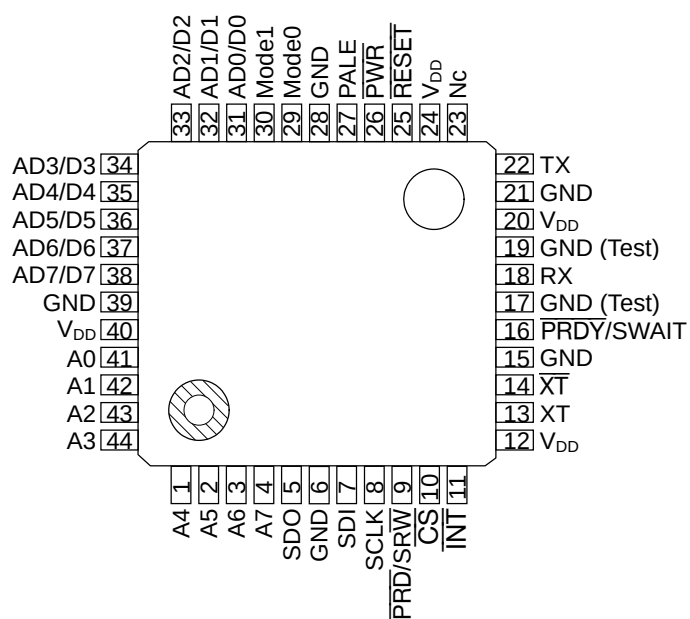
GENERAL DESCRIPTION

The ML9620 is a microcontroller peripheral LSI which conforms to the CAN protocol for high-speed LANs in automobiles.

FEATURES

- Conforms to CAN protocol specification (Bosch, V2.0 part B/Active)
- Maximum of 1 Mbps bit rate
- Message box:
 - Up to 32 message boxes can be used, and messages up to 8 bytes long can be transmitted or received for each message box
 - Number of received messages can be extended by group message function (Each Message box has its own Identifier Mask)
 - Programmable FIFO mode
- Priority control by message objects number:
 - 2032 types in standard format, 2032×2^{18} types in extended format
- Microcontroller interface:
 - Corresponding to both parallel and serial interface
 - Parallel interface: Separate address/data bus type (with address latch signal / no address latch signal) and multiplexed address/data bus type
 - Serial interface: Synchronous communication type
 - Three interrupt sources: transmission/receive/error
 - Two message interface register buffer
- Error control:
 - Bit error/stuff error/CRC error/form error/acknowledgment error detection functions
 - Retransmission/error status monitoring function when error occurs
 - Bit error flag/stuff error flag/CRC error flag/form error flag/acknowledge error flag are provided
- Communication control by remote data request function
- Sleep and Stop mode function
- Disable Automatic Retransmission mode for Time Triggered CAN applications
- Supply voltage: 3.3V, 5V
- Clock frequency: 8MHz@V_{DD}=3.3V, 8 to 16MHz@V_{DD}=5 V
- Operating temperature: -40 to +85°C (for Industrial)
-40 to +125°C (for Automobile)
- Package: 44-pin plastic QFP (QFP44-P-910-0.80-2K)

BLOCK DIAGRAM

PIN CONFIGURATION (TOP VIEW)**44-Pin Plastic QFP**

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Condition	Rating	Unit
Power supply voltage	V_{DD}	$T_a = 25^{\circ}\text{C}$	-0.3 to +7.0	V
Input Voltage	V_{IN}	$T_a = 25^{\circ}\text{C}$	-0.3 to $V_{DD} + 0.3$	V
Storage temperature	T_{STG}	—	-65 to +150	$^{\circ}\text{C}$

RECOMMENDED OPERATING CONDITIONS

Parameter	Symbol	Condition	Rating	Unit
Power supply voltage	V_{DD}	3.3V	3.0 to 3.6	V
		5V	4.5 to 5.5	V
Operating temperature	T_{OP}	for Industrial	-40 to +85	$^{\circ}\text{C}$
		for Automobile	-40 to +125	$^{\circ}\text{C}$
Master clock frequency	f_{OSC}	$V_{DD}=3.3\text{V}$	8	MHz
		$V_{DD}=5\text{V}$	8 to 16	MHz

REVISION HISTORY

Document No.	Date	Page		Description
		Previous Edition	Current Edition	
FEDL9620-01	Aug. 29, 2003	–	–	First edition

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