

# FlexCAN Controller

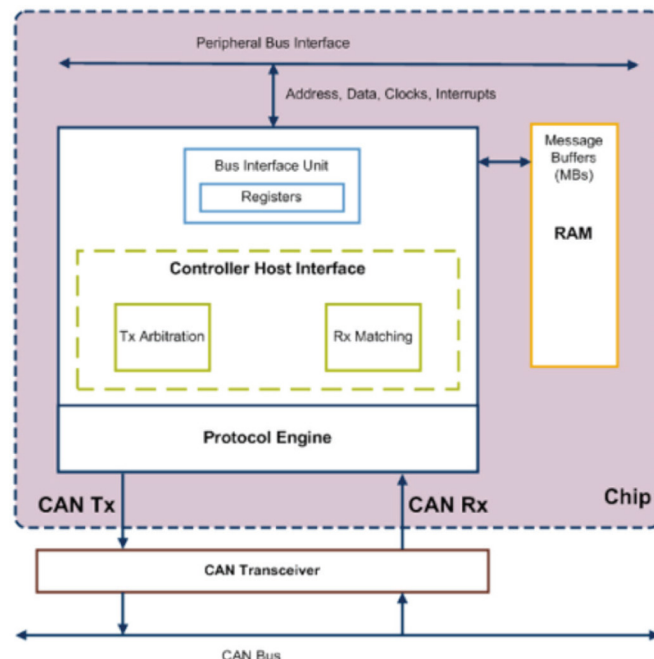
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## Overview

The FlexCAN controller is a highly configurable, synthesizable core implementing the CAN protocol (ISO 11898-1), CAN with Flexible Data rate (CAN FD), and CAN 2.0 B protocol specifications, built from silicon-proven technology.

## Key Features

- Full implementation of CAN FD and CAN 2.0 B
  - Standard/extended data frames
  - Up to 8Mbit/s
  - 0-64 bytes data length
- Compliant with ISO 11898-1
- Flexible mailboxes configurable
  - To store 0-8, 16, 32, or 64 data bytes
  - As receive or transmit
- Individual Rx mask register per mailbox
- Full featured Rx FIFO, stores up to 6 frames
- Transmission abort capability
- Listen-only mode
- Loop-back mode supporting self-test operation
- Programmable transmission priority scheme
- Time stamp based on 16-bit free-running timer with an optional external time tick
- Low power modes with programmable wake-up on bus activity or matching with received frames (pretended networking)
- Transceiver delay compensation for CAN FD Tx at faster data rates
- Detection and correction of memory read (ECC)
- SystemVerilog integration testbench including a number of usage scenarios



## Hardware Configuration Parameters

OPTION	RANGE
IRMQ_EN	Yes or No
LOCK_IRMQ	Yes or No
ECC_EN	Yes or No
DMA_EN	Yes or No
PNET_EN	Yes or No
FD_EN	Yes or No
NUMBER_OF_MB	16, 32, 64, 96, 128

## Deliverables

- Verilog RTL source code
- Test bench with test suites
- Documentation including User's Guide and Integration Guide
- Technology-independent synthesis constraints

For more information, please contact us at [ip@silvaco.com](mailto:ip@silvaco.com).

**SILVACO**

HEADQUARTERS  
4701 Patrick Henry Drive, Bldg #23  
Santa Clara, CA 95054



Rev 060920\_05  
70017

NORTH AMERICA  
BRAZIL  
EUROPE

[sales@silvaco.com](mailto:sales@silvaco.com)  
[br\\_sales@silvaco.com](mailto:br_sales@silvaco.com)  
[eusales@silvaco.com](mailto:eusales@silvaco.com)

JAPAN  
KOREA  
TAIWAN  
SINGAPORE  
CHINA

[jpsales@silvaco.com](mailto:jpsales@silvaco.com)  
[krsales@silvaco.com](mailto:krsales@silvaco.com)  
[twsales@silvaco.com](mailto:twsales@silvaco.com)  
[sgsales@silvaco.com](mailto:sgsales@silvaco.com)  
[cn\\_sales@silvaco.com](mailto:cn_sales@silvaco.com)

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