

MB91F465XA Next generation MCU with embedded FlexRay™ interface



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Description

The MB91F465XA is the latest addition to Fujitsu's growing family of FlexRay MCUs.

Based on the E-Ray core licensed from Robert Bosch GmbH, MB91F465XA utilises the VHDL code certified by TÜV Nord. The device supports 2-channel and FiFo operations, and with more than 8kBytes of message buffer memory, up to 128 different identifiers can be supported.

In addition to the FlexRay bus interface, two CAN and three LIN-USART interfaces enable interface to all standard automotive bus systems. Using a compact 100-pin LQFP package, this series is ideally suited to automotive applications such as driver assistance systems.

The FR series MB91F465XA is a member of the MB91460 series which follows Fujitsu's MCU family concept that allows users to re-use their software over different family members.

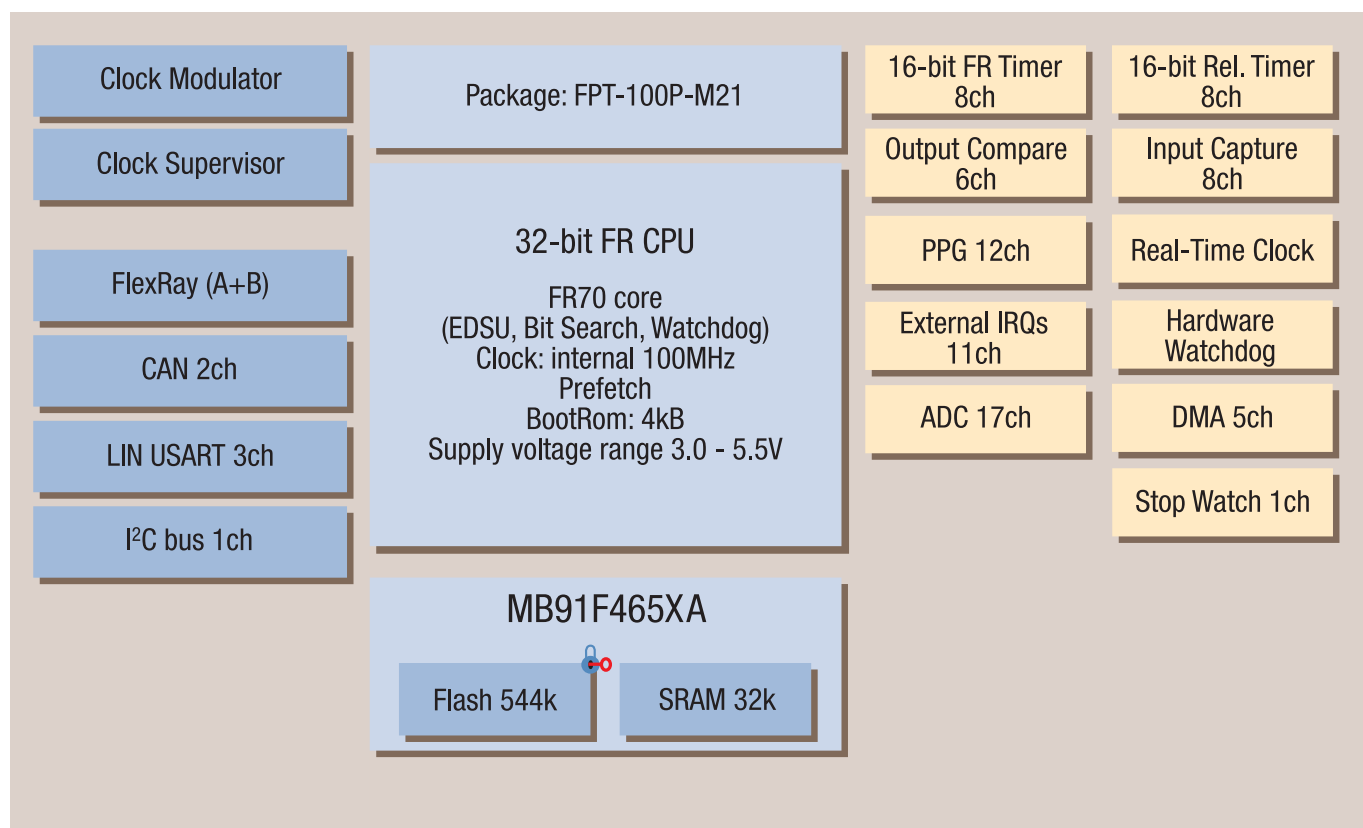
The MB91F465XA series operates from a single supply ranging from 3.0 to 5.5V. Internal frequencies of up to 100MHz are generated via the on-chip PLL using external 4MHz quartz as clock input. With 544kB of flash memory and 32kB of RAM, the MB91F465XA is well-suited for AUTOSAR requirements.

Features

- 3.0 - 5.5V supply range
- 544kB flash memory
- Flash security: Read-out protection
- 32kB RAM
- Max.100MHz operating frequency
- Hardware watchdog
- 1 FlexRay interface with 2 channels
- CAN: 2 channels with 32 message buffers each
- LIN-USART: 3 channels including FIFO function
- 10-bit ADC: 17 channels
- PPG: 12 channels
- Output Compare Unit: 6 channels
- Input Capture: 8 channels
- Stop Watch Function: 1 channel
- I²C: 1 channel
- External interrupts: 11 channels
- Reload Timer: 8 channels
- RTC module which can operate on external 4MHz or 32kHz crystals
- Package: 100-pin LQFP



SK-91F465X-100PMC evaluation board.



MB91F465X MCU: Application - Driver assistance system (LCA.LDW) steering angle sensor.

Software

- Fujitsu FlexRay Driver (FFRD)
 - Free license for evaluation purposes
 - Source code delivery
- DECOMSYS::COMMSTACK
- Software examples

Development tools

- SK-91F465X-100PMC starter kit includes:
 - MB91F465XA MCU
 - FlexRay software driver
 - Light or trial version of configuration tools from DECOMSYS and TZM
 - Softune workbench

Documentation

For latest documentation on the MB91F465XA please click the following links:

- <http://www.fujitsu.com/emea/services/microelectronics/micros/flexray/>
- <http://www.fujitsu.com/global/services/microelectronics/technical/flexray/index.html>

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