MCX W23: Ultra-Low Power Bluetooth® Low Energy Solution With Arm® Cortex® M33 TrustZone® for IoT

MCX-W23

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The MCX W23 provides connectivity solutions for IoT applications. The MCX W23 device constitute a highly integrated, single chip, ultra-low-power Bluetooth® Low Energy 5.3 wireless transceiver with embedded microcontroller and flash.
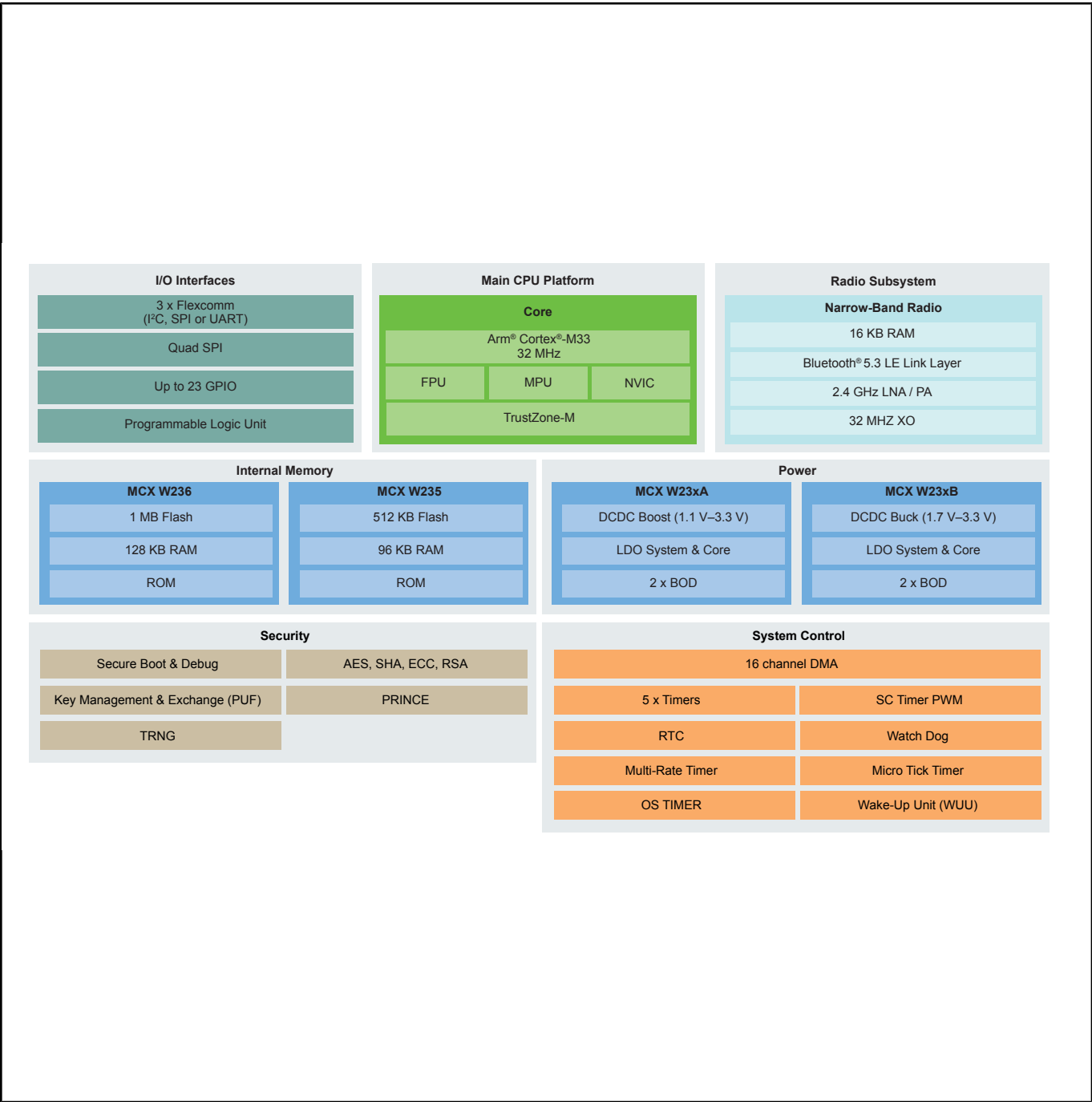
Because of the integrated ultra-low-power radio and flash, the MCX W23 provides extended battery lifetime. The MCX W23 is a cost-effective solution within a small solution area required for body-worn / battery-powered sensors and actuator applications.

Enable with the flexible Buck and Boost option of the DCDC converter, the MCX W23 runs directly from a large range of batteries.

Built with advanced security in mind, the MCX W23 is part of the Certified Edgelock Assurance program (SESIP Level 2 / PSA Level 2).

MCX W23 and enablement (documentation, software and boards) are available. For additional information and sample availability, contact support or your local sales representative.

MCX W23 Block Diagram

I/O Interfaces
3 x Flexcomm
(I²C, SPI or UART)

Quad SPI

Up to 23 GPIO

Programmable Logic Unit

Main CPU Platform
Core

Arm® Cortex®-M33
32 MHz

| FPU | MPU | NVIC |

TrustZone-M

Radio Subsystem
Narrow-Band Radio

16 KB RAM

Bluetooth® 5.3 LE Link Layer

2.4 GHz LNA / PA

32 MHZ XO

Internal Memory

MCX W236	MCX W235
1 MB Flash	512 KB Flash
128 KB RAM	96 KB RAM
ROM	ROM

Power

MCX W23xA	MCX W23xB
DCDC Boost (1.1 V–3.3 V)	DCDC Buck (1.7 V–3.3 V)
LDO System & Core	LDO System & Core
2 x BOD	2 x BOD

Security
Secure Boot & Debug	AES, SHA, ECC, RSA
Key Management & Exchange (PUF)	PRINCE
TRNG	

System Control
16 channel DMA

5 x Timers	SC Timer PWM
RTC	Watch Dog
Multi-Rate Timer	Micro Tick Timer
OS TIMER	Wake-Up Unit (WUU)

View additional information for MCX W23: Ultra-Low Power Bluetooth® Low Energy Solution With Arm® Cortex® M33 TrustZone® for IoT.

Note: The information on this document is subject to change without notice.