



# K32W041AM/A: High Performance, Secure and Low-Power MCU for Zigbee<sup>®</sup>, Thread<sup>™</sup> and Bluetooth<sup>®</sup> LE 5.0 with High Tx Power Option

## K32W041AM-A

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The K32W0x portfolio is designed to power the next generation of ultra-low-current multiprotocol wireless IoT devices with support for Matter, IEEE 802.15.4 mesh network protocols Zigbee and Thread and Bluetooth Low Energy 5.0. The K32W041AM/A are compatible with the [K32W061/41](#).

The K32W041AM and K32W041A family members support longer range and expanded memory optimized to facilitate home and building automation, smart lighting, smart locks, gateways, and routers.

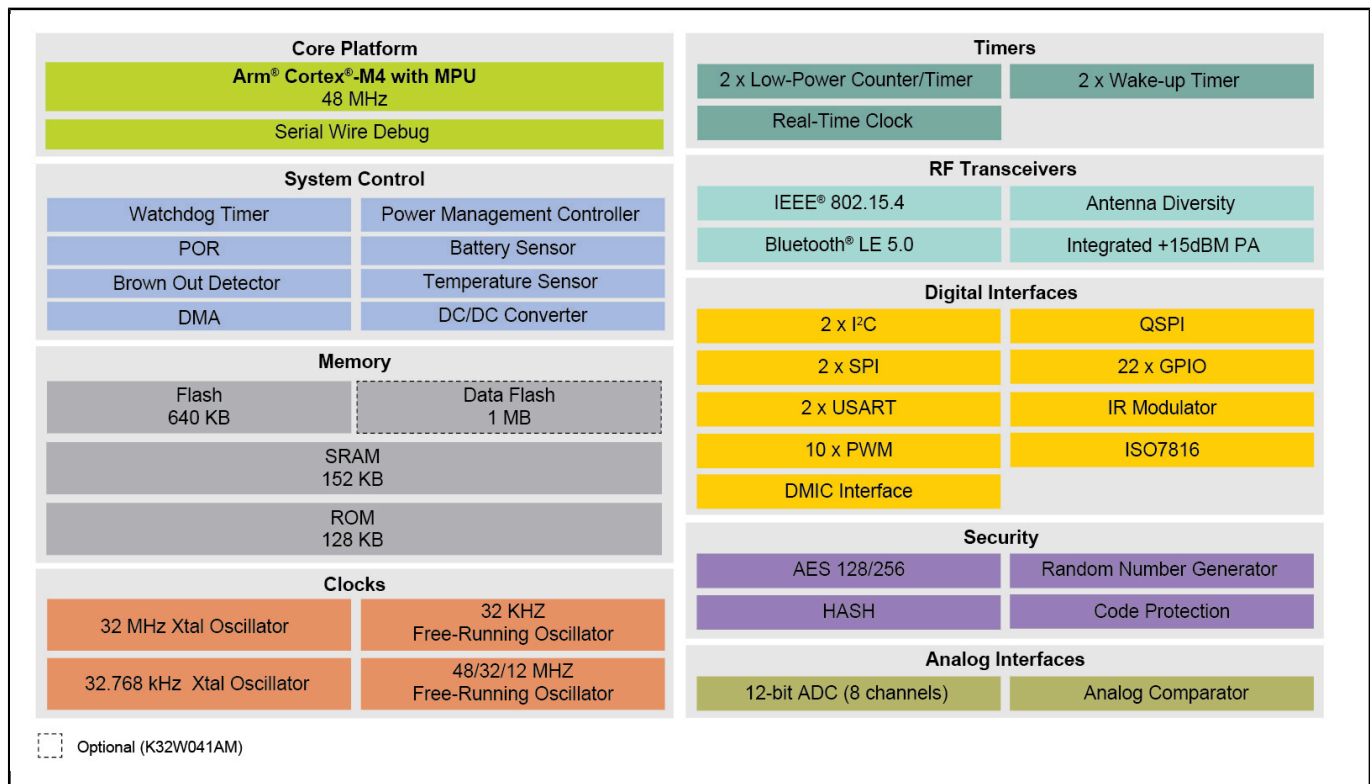
The K32W041A/K32W041AM includes a 2.4 GHz Bluetooth Low Energy 5 (supporting eight simultaneous connections) compliant transceiver, a 2.4 GHz IEEE 802.15.4 compliant transceiver and a comprehensive mix of analog and digital peripherals. With 640 KB embedded Flash, 152 KB RAM memory, additional 1 MB data Flash with the K32W041AM, and support for Over-the-Air (OTA) updates, the K32W0x family provides scalability to address a variety of memory requirements. In addition, the K32W041AM/A extends the wireless radio output power to +15dBm.

These devices include a 10-channel PWM, two timers, one RTC/alarm timer, a Windowed Watchdog Timer (WWDT), two USARTs, two SPI interfaces, two I2C interfaces, a DMIC subsystem including a dual-channel PDM microphone interface with voice activity detector, one 12-bit ADC, temperature sensor and a comparator. The Arm Cortex-M4 is a 32-bit core operating at up to 48MHz that offers system enhancements such as low power consumption, enhanced debug features, and a high-level support of the block integration.

Devices across the K32W0x, JN18x and QN90x0 families are supported with common software stacks: Zigbee, OpenThread and Bluetooth LE.

For additional information and sample availability, contact your local [Sales Office](#).

## K32W041AM/A Block Diagram Block Diagram



View additional information for [K32W041AM/A: High Performance, Secure and Low-Power MCU for Zigbee®, Thread™ and Bluetooth® LE 5.0 with High Tx Power Option](#).

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

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