



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

## K32W041AM-A

### Preproduction

This page contains information on a preproduction product. Specifications and information herein are subject to change without notice. For additional information [contact support](#) or your sales representative.

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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 IEEE 802.15.4 mesh network protocols Zigbee and Thread as well as Bluetooth Low Energy 5.0. This portfolio also supports Matter, the unified IP-based application layer to work across ecosystems being developed by the Connectivity Standards Alliance, targeted for release by end of 2021.

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.

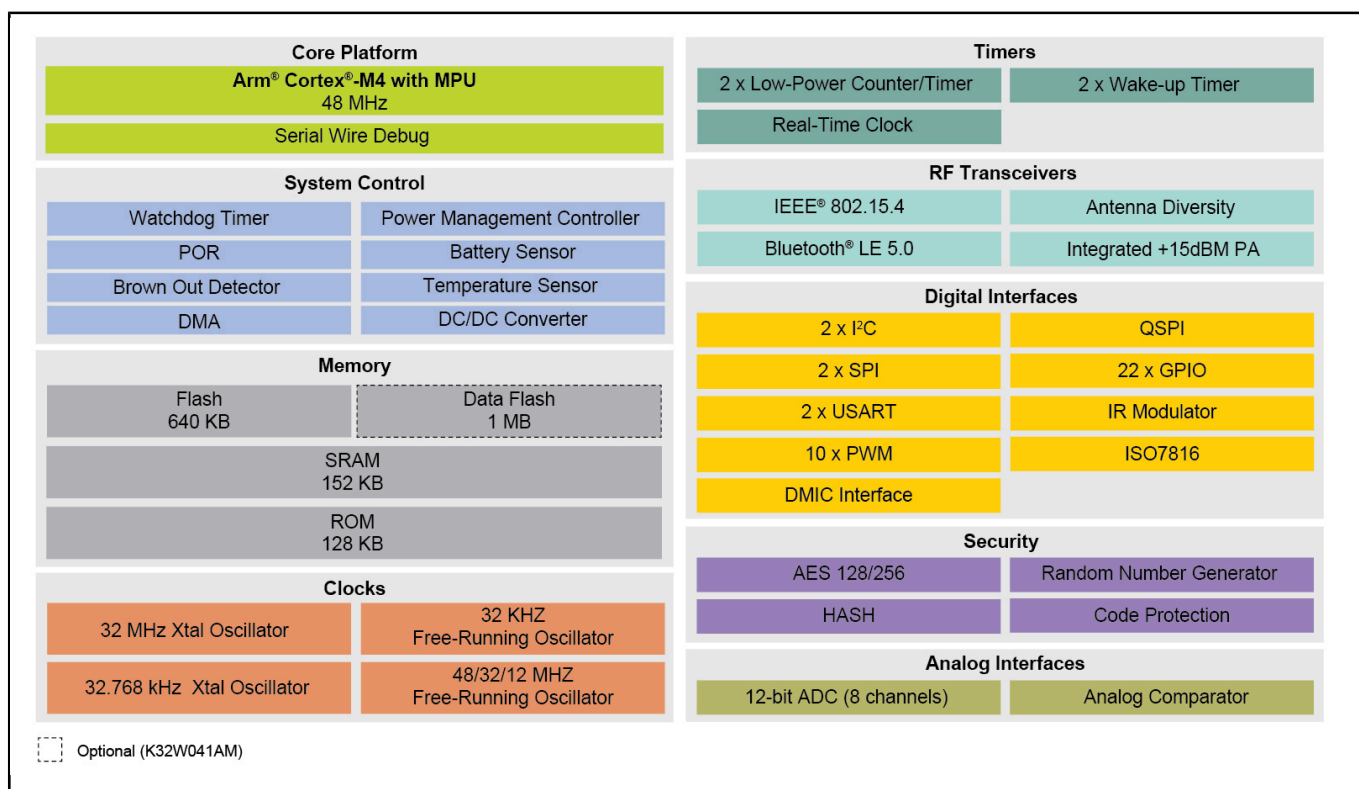
These devices include a 10-channel PWM, two timers, one RTC/alarm timer, a Windowed Watchdog Timer (WWDT), two USARTs, two SPI interfaces, two I2C interfaces, a DMIC subsystem including a dual-channel PDM microphone interface with voice activity detector,

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](#).

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