

Kinetis® KW31Z-2.4 GHz Bluetooth Low Energy Wireless Radio Microcontroller (MCU) based on Arm® Cortex®-M0+ Core

KW31Z

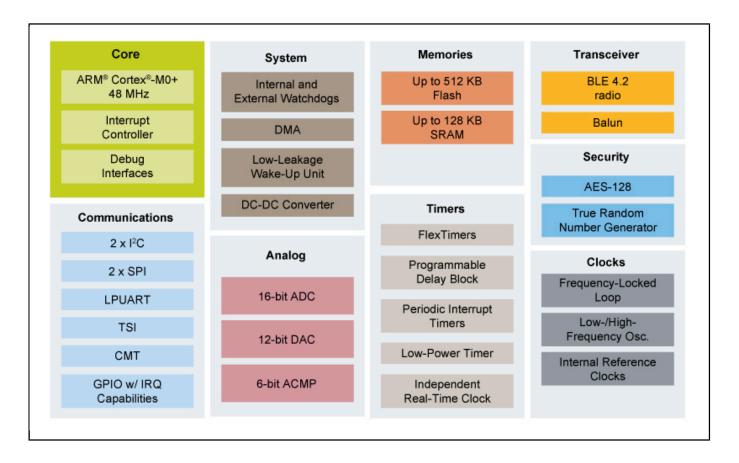
Last Updated: Dec 23, 2025

Note: QN9090/30 is preferred for any new Bluetooth LE design. No new software releases planned

The KW31Z is an ultra-low-power, highly-integrated single-chip device that enables Bluetooth® low energy v4.2 RF connectivity for portable, extremely low-power embedded systems. Applications include portable healthcare devices, wearable sports and fitness devices, AV remote controls, computer keyboards and mice, gaming controllers, access control security systems, smart energy and home area networks.

The KW31Z Wireless MCU integrates a 2.4 GHz transceiver supporting FSK/GFSK modulations, an Arm® Cortex®-M0+ CPU, up to 512 KB Flash and up to 128 KB SRAM, Bluetooth Low Energy Link Layer hardware, hardware security and peripherals optimized to meet the requirements of the target applications.

Kinetis® W Series KW31Z MCUs Block Diagram Block Diagram



View additional information for Kinetis® KW31Z-2.4 GHz Bluetooth Low Energy Wireless Radio Microcontroller (MCU) based on Arm® Cortex®-M0+ Core.

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

www.nxp.com

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. The related technology may be protected by any or all of patents, copyrights, designs and trade secrets. All rights reserved. © 2026 NXP B.V.