STM32WBx0 VALUE LINE

life.augmented

Bluetooth LE 5.2 & IEEE 802.15.4

The STM32WBx0 is a dual-core wireless MCU based on an Arm® Cortex®-M4 core running at 64 MHz and an Arm® Cortex®-M0+ core at 32 MHz

A wireless dual-core brain

The STM32WBx0 Value Line is an entry-level solution, extending our portfolio to allow developers to define the right level of features for cost-efficient design to meet the requirement of a broad range of industrial and consumer IoT applications. Thanks to its low-power stop and standby modes and best-in-class RF performance, the STM32WBx0 Value Line provides application connectivity with an extended battery life, making it ideal for point to point or meshed applications such as innovative location-based services in retail marketing, asset tracking, beaconing…

Bluetooth® LE 5.2 & IEEE 802.15.4*

Value Line of wireless microcontrollers addresses Bluetooth® LE 5.2-certified stack, with Mesh 1.0 and multiple profiles. It also supports several IEEE 802.15.4 meshed protocols with Zigbee® PRO and its wide set of Zigbee 3.0 Clusters, as well as OpenThread.

IP Protection

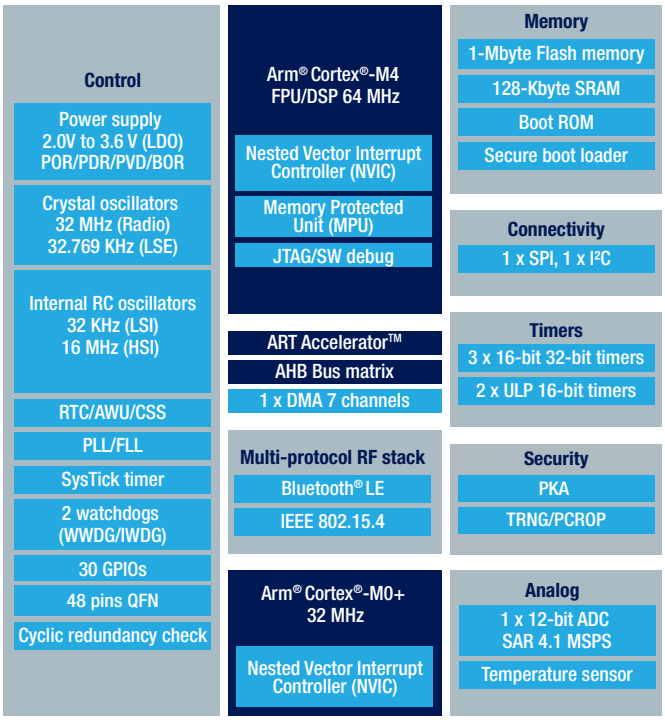
STM32WB devices offer device integrity and industrial IP protection features to meet manufacturers' increasing demand for brand protection.

Note : * Features availability or caracteristics depend on STM32WB reference

Features*	Benefits
Dual-core solution in a single die	Dual-core solution with independent clock trees ensures real-time RF execution and optimized PCB and BOM
+4dBm max output power **BLE: –96 dBm (all value line references)** **802.15.4: –100 dBm (STM32WB30 & STM32WB50)**	Comfortable and robust operating distance of connection
Integrated balun **Easy package integration**	Reduces BOM cost and 2 layers PCB footprint
Up to 1MB flash, 30 GPIOs, RTC, high resolution ADC and multi communication interfaces	A 2 in 1 effective centric solution for wireless platforms

www.st.com/stm32wbvl

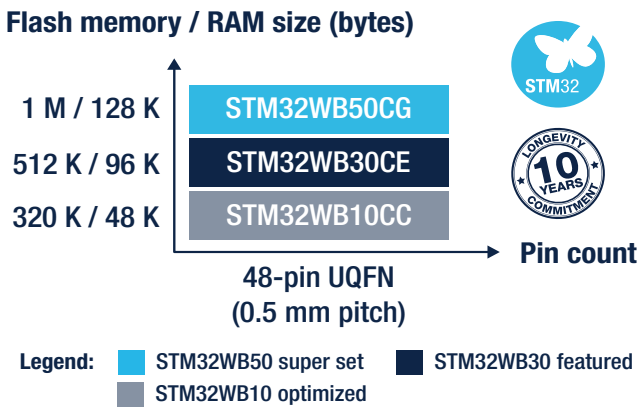
STM32WB50 BLOCK DIAGRAM



STANDARD PROTOCOL

OPENTHREAD released by Google · Bluetooth 5 · Zigbee 3.0

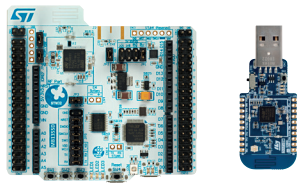
STM32WBx0 PORTFOLIO



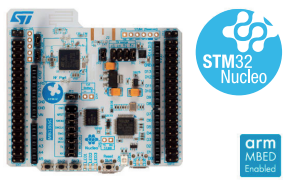
Companion chip
STMicroelectronics' integrated matching RF components are tailored for STM32WB packages : MLPF-WB-01E3.

HARDWARE TOOLS

This STM32 Nucleo pack is the most cost-effective way to quickly get started developing STM32WB-based prototypes.



Order code: P-NUCLEO-WB55



Order codes: NUCLEO-WB55RG
NUCLEO-WB15CC

EMBEDDED SOFTWARE

The STM32CubeWB package includes the STM32Cube hardware abstraction layer (HAL) and low-layer (LL) APIs peripheral drivers, a consistent set of middleware components (RTOS, FatFS), as well as Bluetooth® LE 5.2, OpenThread and Zigbee 3.0 connectivity stacks. All embedded software components come with a full set of examples running on STMicroelectronics boards.

SOFTWARE TOOLS

STM32CubeMX

Enables faster development thanks to its MCU pinout and clock configurator, power consumption calculator and code generation tools.

STM32 CubeMX

STM32CubeIDE

Is an Eclipse-based IDE which integrates the features of the STM32CubeMX configuration tool.

STM32 CubeIDE

STM32CubeMonitor

Is a development tool dedicated to wireless connectivity (STM32CubeMonRF) which helps reduce time-to-market by enabling radio testing and beaconing.

STM32 CubeMonitor

STM32CubeProg

Is an all-in-one software tool for programming STM32 devices which can be easily used to interact with the memory of the STM32WB, including secure programming of the RF stacks.

STM32 CubeProgrammer

STM32WB ONLINE TRAINING
www.st.com/stm32wb-online-training