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STMicroelectronics Boosts IoT Design Productivity with First STM32 Wireless Microcontroller Module

- *Offloads complete RF design for faster time to market*
- *Assures optimized wireless performance, low power, compact footprint*
- *Bluetooth® LE, Zigbee®, and OpenThread Certified*
- *FCC, CE, JRF, KC, SRRC[1], GOST geographical certifications*

Geneva, January 5, 2021 – STMicroelectronics (NYSE: STM), a global semiconductor leader serving customers across the spectrum of electronics applications, is offering a solution to accelerate the market introduction of new Bluetooth® LE and 802.15.4 based IoT devices with a miniature, ready-to-use STM32 wireless microcontroller (MCU) module.

The 7mm x 11.3mm STM32WB5MMG module lets product teams build connected devices without needing wireless-design skills. Made to enable low-cost PCB technology requiring a minimal number of layers, it integrates everything up to the antenna. Users can also leverage the tools, design wizards, radio stacks, and turnkey software libraries of ST's STM32Cube MCU development ecosystem, available free of charge, to complete the project quickly and efficiently.

"*Our first STM32-based wireless module simplifies technical challenges and extends exciting opportunities for smart connected devices*," said Ricardo de Sa Earp, Group Vice President, Microcontroller Division General Manager, STMicroelectronics. *"A complete ready-to-use subsystem in a single package, the STM32WB5MMG assures excellent radio performance out of the box and comes as a certified solution according to Bluetooth, Zigbee®, and OpenThread specifications."*

In addition, the module supports ST's novel concurrent dual-protocol mode that lets any protocol based on IEEE 802.15.4 radio technology, including Zigbee 3.0 and OpenThread, connect the user directly to any Bluetooth Low Energy device.

Benefitting from all features of ST's STM32WB55 ultra-low power wireless microcontroller ICs, the module addresses a wide variety of opportunities for smart-home, smart-building, and smart-factory equipment. Users can leverage the MCU's dual-core architecture that separates radio and application-level processing for unimpeded performance, large memories for radio and application code and data storage, and state-of-the-art cybersecurity.

The STM32WB5MMG is available now, from $5.66 for orders of 10,000 pieces.

[1] *Final certification available in January 2021*

Further Technical information:

The STM32WB5MMG can address market opportunities at all levels, including cost-sensitive and highly miniaturized devices. Designers can create a simplified, low-cost PCB leveraging the module's optimized pin-out and take advantage of existing STM32WB55 MCU firmware libraries and toolchain. In addition, ST has created a dedicated application note as extra guidance for module users.

The module integrates a miniature antenna properly matched to the receiver circuitry, built-in Switched-Mode Power Supply (SMPS) circuitry, and frequency-control components. With support for crystal-less USB Full-Speed connectivity, the module lets users minimize bill-of-materials costs as well as simplifying the hardware design.

Cyber protection includes secured software updates including Over-The-Air (OTA) for brand protection and device integrity, customer key storage and Proprietary Code Readout Protection (PCROP) to protect developers' intellectual property, and Public Key Authentication (PKA) support for cryptographic protection of code and connections.

By combining high RF performance with low power consumption, the module ensures reliable connectivity with extended battery life.

You can also read our blogpost at https://blog.st.com/stm32wb55mmg/

About STMicroelectronics

At ST, we are 46,000 creators and makers of semiconductor technologies mastering the semiconductor supply chain with state-of-the-art manufacturing facilities. An independent device manufacturer, we work with our 100,000 customers and thousands of partners to design and build products, solutions, and ecosystems that address their challenges and opportunities, and the need to support a more sustainable world. Our technologies enable smarter mobility, more efficient power and energy management, and the wide-scale deployment of the Internet of Things and 5G technology. Further information can be found at www.st.com.

For Press Information Contact:

Michael Markowitz
Director Technical Media Relations
STMicroelectronics
Tel: +1 781 591 0354
Email: michael.markowitz@st.com