MM6108-EKH08 Evaluation Kit

Industry-Leading, Best-in-class Wi-Fi HaLow Development Platform Supporting Bluetooth Low Energy

Overview

The MM6108-EKH08-05US-01 evaluation kit is a fully integrated Wi-Fi HaLow® development platform that works with a Bluetooth®-capable STMicro board. This powerful collaboration embeds low-power connectivity into the evaluation process, while delivering superior RF performance and compliance.

The MM6108-EKH08-05US-01 development platform has been designed for Wi-Fi HaLow connectivity in compliance with the IEEE 802.11ah standard. It supports data rates up to 32.5 Mbps with programmable operation between 850 MHz and 950 MHz. This multi-protocol, ultra-low-power wireless development platform supports Wi-Fi HaLow while maintaining low-rate wireless personal area networks (IEEE 802.15.4-2011) and Bluetooth Low Energy.

Evaluation Kit

Designed for developers seeking to validate Wi-Fi HaLow use cases for IoT environments, this kit includes the Morse Micro MM6108 SoC as well as the STMicro STM32 NUCLEO-WB55RG board for compliant Bluetooth connectivity.

Total kit contents include:

- Wi-Fi HaLow shield (p/n: MMECH08) with MM6108 module (p/n: MM6108-MF08651-US)
- STM32 NUCLEO-WB55RG board
- SB cable
- Antenna

Features

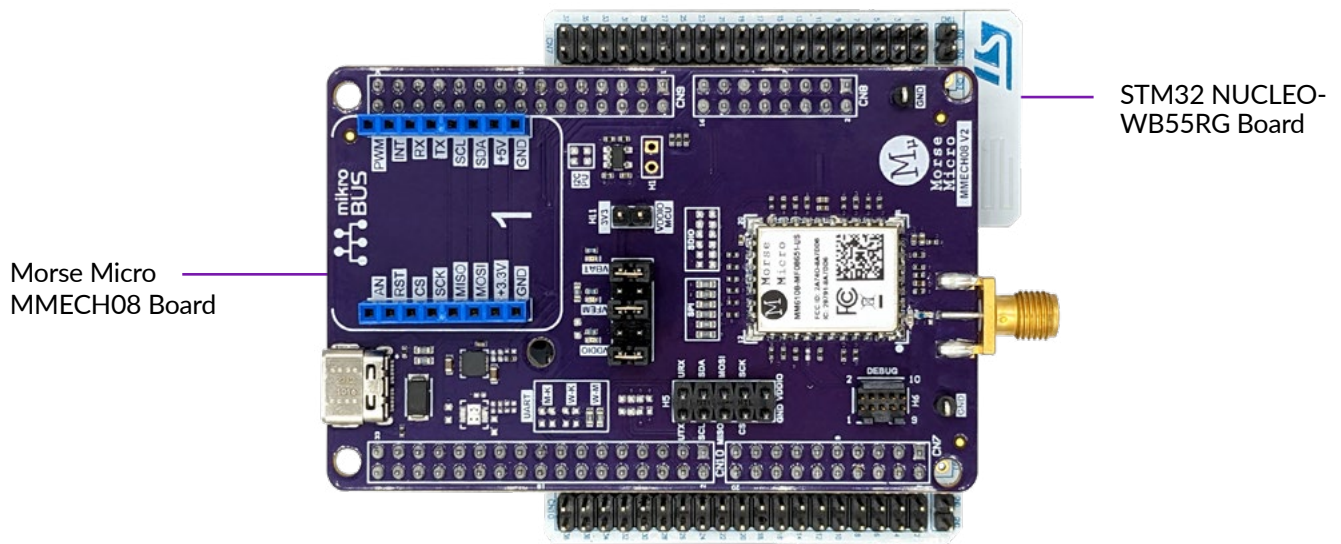|				
Powerful and ultra-low-power radio compliant with the Bluetooth Low Energy (BLE) SIG specification v5.2	Simple configuration for fast and efficient evaluation of Bluetooth and Wi-Fi HaLow	Supports data rates up to 32.5 Mbps	2.4 GHz RF transceiver supporting IEEE 802.15.4-2011 PHY and MAC with additional proprietary protocols	Supports a range of integrated development environments (IDEs), e.g. IAR Embedded Work-bench®, and Mbed Studio
Flexible power-supply options: ST-LINK, USB VBUS, or external sources (including USB-C)	Integrated PCB antenna and SMA connector footprint	Dedicated Arm® 32-bit Cortex® M0+ CPU for real-time radio functionality	WPA3 security and on-board ST-LINK/V2-1 debugger/programmer with USB re-enumeration	Programmable operation in the sub-1 GHz range (license exempt from RF bands worldwide)

Applications

- Cloud connectivity
- Machine performance monitors and sensors
- Connected vehicles
- Environmental monitoring
- Utility smart meter and intelligent grids
- Industrial automation controls
- Industrial, agricultural and commercial management
- Smart city networks
- Public safety monitoring
- Logistics and tracking
- Connected healthcare and wearables
- Smart home automation and connected appliances
- Building access control & security

Kit Contents

STM32 NUCLEO-WB55RG Board

Morse Micro MMECH08 Board

Wi-Fi HaLow Modulation and Coding Scheme

MCS index	Modulation scheme	Coding rate	PHY rate (kbps) per BW			
			1 MHz	2 MHz	4 MHz	8 MHz
10	BPSK	1/2 x 2	167		N/A	
0	BPSK	1/2	333	722	1500	3250
1	QPSK	1/2	667	1444	3000	6500
2	QPSK	3/4	1000	2167	4500	9750
3	16-QAM	1/2	1333	2889	6000	13000
4	16-QAM	3/4	2000	4333	9000	19500
5	64-QAM	2/3	2667	5778	12000	26000
6	64-QAM	3/4	3000	6500	13500	29250
7	64-QAM	5/6	3333	7222	15000	32500

For more product information: **www.morsemicro.com**

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