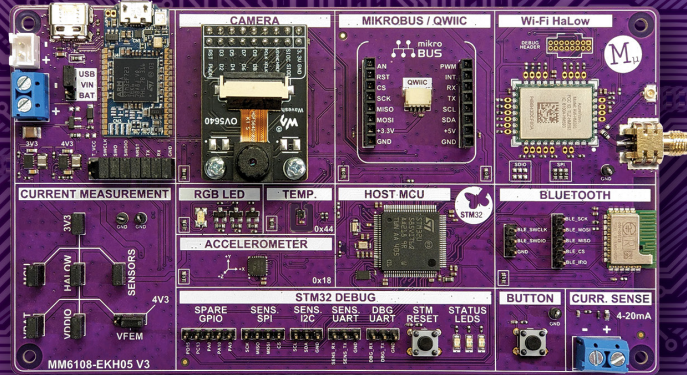




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PRODUCT BRIEF

MM6108-EKH05 Evaluation Kit



IEEE 802.11ah Sub-1 GHz 1/2/4/8 MHz BW MAC/PHY/Radio Wi-Fi HaLow SoC

Overview

The MM6108-EKH05 evaluation kit is a fully integrated Wi-Fi HaLow development platform, designed for a wide range of IoT applications—from smart home devices to industrial automation systems. Featuring an Azurewave AW-HM593 module which utilizes the Morse Micro MM6108 Wi-Fi HaLow low-power SoC, alongside the STM32U585 low-power microcontroller (MCU) and the BlueNRG-M2 Bluetooth® SoC, the kit offers robust wireless connectivity, low power consumption, and an extensive range of programmable interfaces and sensors. When used with a Morse Micro based Access Point, it enables developers to create almost any Wi-Fi HaLow client project, making it an ideal platform for developers to move quickly from concept to proof of concept in developing low power IoT solutions.

The MM6108-EKH05 supports all major operating systems (Windows, Linux and macOS) giving developers unprecedented access to the Wi-Fi HaLow technology.

The key features of the MM6108-EKH05 Wi-Fi HaLow evaluation kit include:

- Wi-Fi HaLow support for long-range, low power wireless connectivity
- Low power host microcontroller
- Bluetooth capabilities for communications and provisioning

- SDK with example applications for rapid development
- Full software debugging with on-board STLinkv3 programmer
- Configurable RF power for HaLow module through FEM voltage selection
- Comprehensive suite of sensors for diverse IoT applications
- On-board still camera module for imaging capabilities
- Versatile expansion headers for extensibility
- Current measurement tree for simplified power consumption analysis
- Multiple power source options including USB, battery or external supply

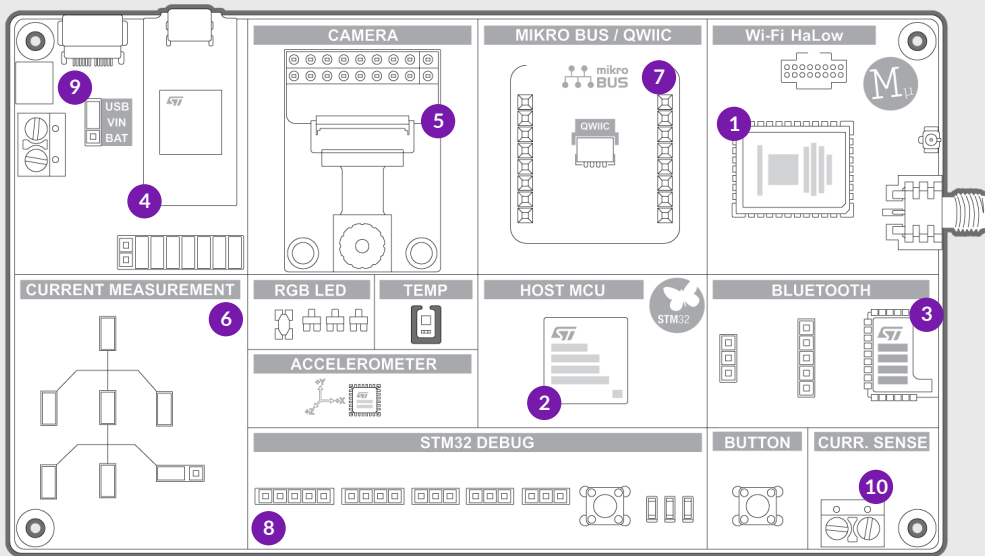
Kit Contents

- 1x MM6108-EKH05
- 1x USB-A to micro-USB cable
- 1x Wi-Fi HaLow SMA Antenna

Applications:

- ✓ Home security cameras
- ✓ Consumer garages
- ✓ Consumer locks
- ✓ Building access control & security
- ✓ Low power sensors
- ✓ Utility smart meter & intelligent grids
- ✓ Cloud connectivity
- ✓ Machine performance monitors & sensors
- ✓ Industrial, agricultural & commercial management
- ✓ Industrial automation controls
- ✓ Smart city networks
- ✓ Public safety monitoring
- ✓ Logistics & tracking
- ✓ Connected healthcare & wearables
- ✓ Smart home automation & connected appliances





The Morse Micro MM6108-EKH05 includes:

1. Wi-Fi HaLow Module
2. Host Microcontroller
3. Bluetooth Module
4. STLink Programmer and Debugger
5. Camera Module
6. Current Measurement Tree
7. Expansion Interfaces
8. Access to Host Microcontroller Peripherals (IC2, SPI, etc)
9. Power Input Selection. USB, Battery, or External Supply
10. 4-20mA Interface

Plus

- Accel / Temp / Humidity / RGB LED / Buttons / Indicator LEDs

Key Features



Single-chip IEEE802.11ah Wi-Fi HaLow® transceiver for low-power, long-reach IoT



Designed for low-power consumption with versatile measurement options



Powerful low-power MCU designed for IoT



Bluetooth module for communications and provisioning



On-board programmer and debugger



On-board still camera module for imaging capabilities



Comprehensive suite of sensors for diverse IoT applications



Current measurement tree for simplified power consumption analysis

Wi-Fi HaLow® Modulation and Coding Scheme

MCS Index	Modulation Scheme	Coding Rate	PHY Rate (Mbps) per BW			
			1 MHz	2 MHz	4 MHz	8 MHz
10	BPSK	1/2 x 2	0.17	-	-	-
0	BPSK	1/2	0.33	0.72	1.5	3.25
1	QPSK	1/2	0.67	1.44	3.0	6.50
2	QPSK	3/4	1.0	2.17	4.5	9.75
3	16-QAM	1/2	1.33	2.89	6.0	13.0
4	16-QAM	3/4	2.0	4.33	9.0	19.5
5	64-QAM	2/3	2.67	5.78	12.0	26.0
6	64-QAM	3/4	3.0	6.5	13.5	29.3
7	64-QAM	5/6	3.34	7.22	15.0	32.5

For more product information: www.morsemicro.com

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