

Wi-Fi Hallow™ Overview

Wi-Fi Hallow™(IEEE802.11ah) is a long-range wireless communication standard developed by IEEE.

Using Wi-Fi Hallow™ enables to acquire images with sensor data to deploy various systems.

■ Features

1. Long-range communication

Enable up communicate up to approx. 1km which is longer than 2.4GHz/5GHz Wi-Fi.

2. Transmission speed

Achieves a transmission speed of approx. 1Mbps, while most existing LPWA systems have ability of several tens of Kbps, which enables long-distance image transmission and firmware updates for IoT devices.

3. High security and IP communication

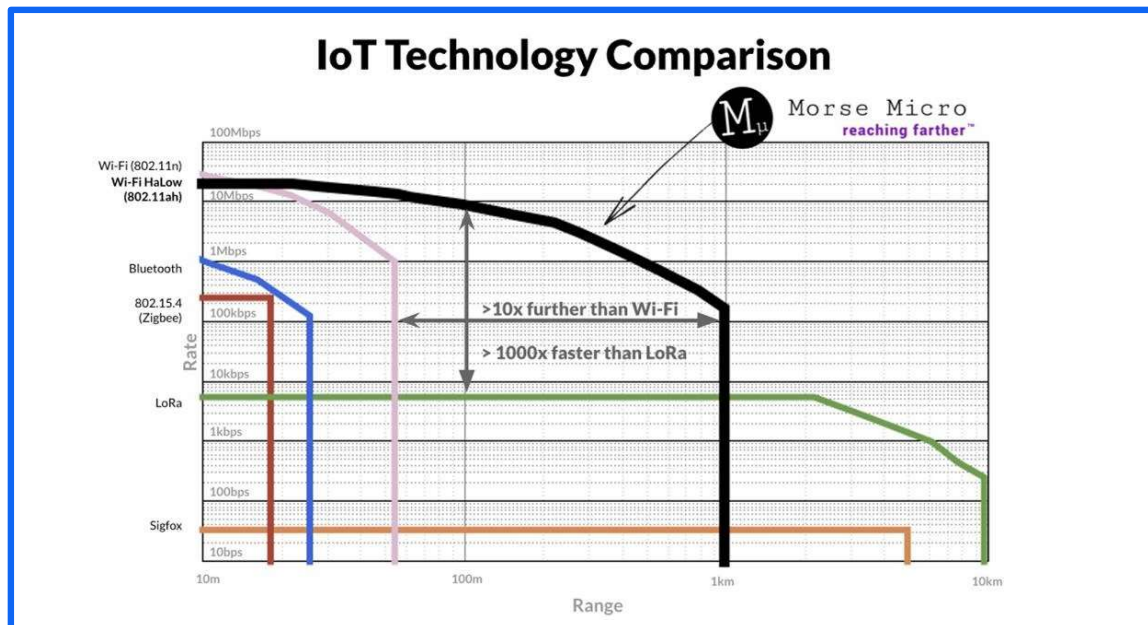
WPA3, a Wi-Fi security function, can be used.

IP communication is available, which TCP/IP stack and upper application layer can be used in another system.

4. Expanded number of connections

8,000 endpoint devices can be connected to a single access point.

■ Comparison with other communications



■ Application

Smart Factory



Home-network

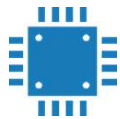


Smart Agriculture



Avian and Disaster Supervisor





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■ Transceiver IC

MM6108



① SoC for Wi-Fi Hallow communication

A single-chip SoC with built-in RF, PHY and MAC. A System can be developed by connecting a few external devices.

② Wide frequency range

The bandwidth of 850MHz to 950MHz is supported. This allows to use around the world, including Japan in accordance with available frequencies.

③ Selectable host interface

The host interface can be selected from SDIO for wide-bandwidth and SPI for low-bandwidth. By using SPI I/F, control with an inexpensive microcontroller is also possible.

④ Easy-to-use packet

6.0mm X 6.0mm QFN package contributes to miniaturization of equipment systems.

■ Evaluation kit

Please use the Raspberry Pi ® integrated development kit for product development. This kit available to use as an access point to check the communication with customers' product, and as endpoint by connecting currently using sensors, cameras, etc.

※Raspberry Pi® is a registered trademark of Raspberry Pi Foundation.

