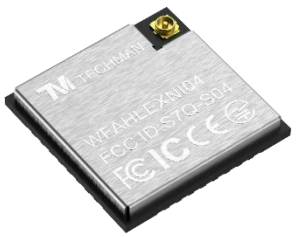
Product Overview

The WFAHLEXNI04 module includes ultra-long-reach PA, high linearity LNA, T/R switch, 32 MHz crystal oscillator and it has been designed for a simplified Wi-Fi HaLow connection to an external host for applications in which a customer wants to merely replace their prior RF technology with a Wi-Fi HaLow connection while leveraging the latest WPA3 personal security protocol.

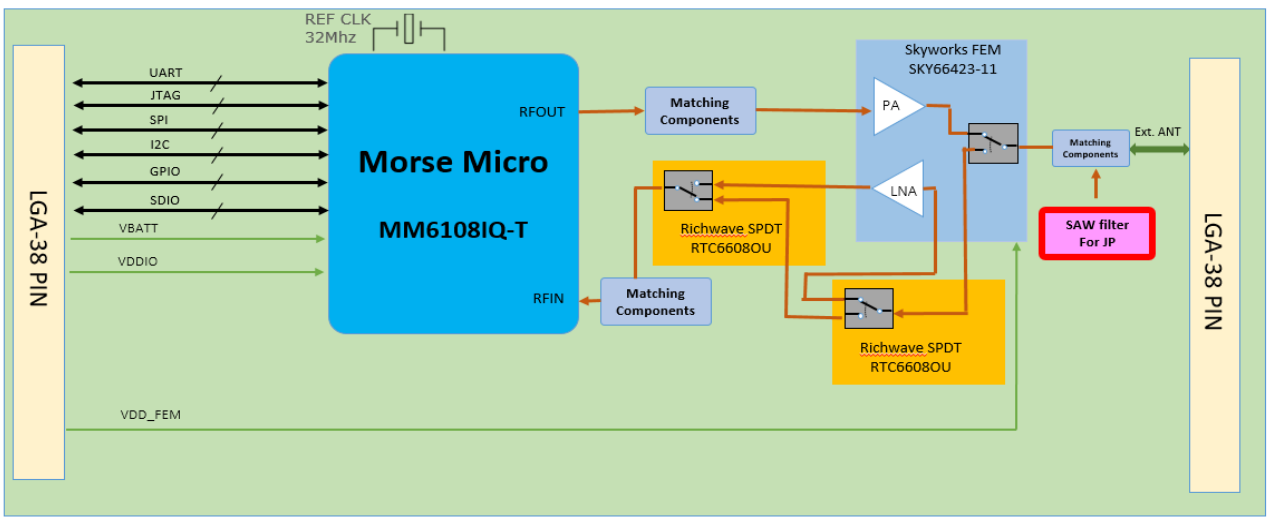
Key Feature



- **Ultra-long-range, low-power Wi-Fi HaLow module for IoT Applications**
- **Support for STA and Soft AP mode**
- **Power-Saving Target Wake Time (TWT) support for long battery life**
- **Single Chip Wi-Fi HaLow Transceiver.**
- **Single-stream max data rate of 32.5 Mbps.**
- **Radio supporting worldwide Sub-1 GHz frequency bands.**
- **802.11ah OFDM PHY supporting future WFA HaLow certification.**
- **Power Management Unit (PMU) for various modes of operation.**
- **SDIO 2.0 and SPI Host interface Options**
- **SDIO Support for both 1-bit and 4-bit data mode.**
- **With FEM Tx power up to 21dBm**
- **WPA3 personal security**
- **Support industrial temperature level**

Wi-Fi HaLow

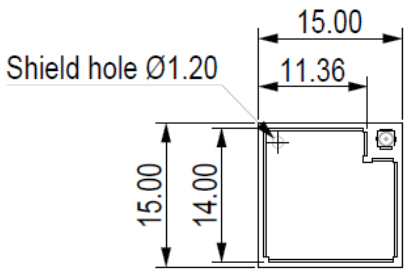
Block Diagram



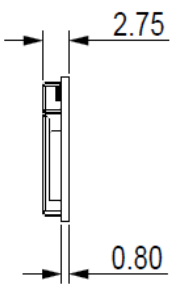
Technical Specifications

Chipset	Morse Micro MM6108
Host Interface	SDIO2.0 (DS at 25MHz, HS at 50MHz)
WLAN Specifications	IEEE 802.11ah
Operating Frequency	860 ~ 930MHz
Bandwidth	1/2/4/8 MHz channel
Max Data Rate	32.5 Mbps @ 8MHz or 15 Mbps @ 4MHz channel
Transmit Power	Max. +21dBm
Receiver Sensitivity	Min. -107dBm
Current Consumption	Tx @ +21dBm: 225mA, Rx: 57.5mA
Deep Sleep Mode	1uA
Peripherals	1x SDIO 2.0 (host interface) 2x UARTs 1x SPI
Form Factor	LGA 38 pins
Antenna	MHF4 Connector x1
Operating Voltage	VBATT: 3.0 to 3.6V VDD_FEM: 3.0 to 3.6V VDDIO: 1.8V / 3.3V
Operating Temperature	-40 to 85°C
Storage Temperature	-40 to 125°C
Host Operating System	Linux 4.19 above
Certifications	FCC, IC, CE, TELEC, NCC

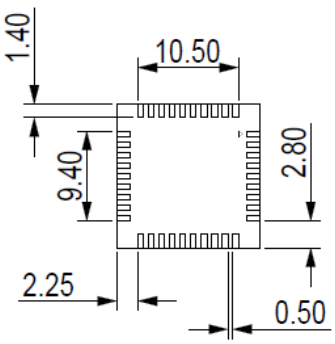
Dimension : 15.0mm x 15.0mm x 2.75mm (± 0.1mm)



Top View



Side View



Bottom View