

## Wi-Fi HaLow™ MCU Module

Part#: MRF61\_FI\_MCU

An MCU module for a rapidly-growing IEEE802.11ah (Wi-Fi HaLow™) solution. Simply add necessary sensors to complete a Wi-Fi HaLow enabled end-point product.

### ■ Features

#### 1. IEEE802.11ah (Wi-Fi HaLow™)

Supports the latest LPWA standard

#### 2. Designed for End-Point Application

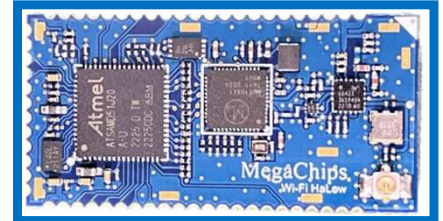
All necessary building blocks are on-board. Just add your preferred sensors and it's ready to go

#### 3. Cloud Service Support

Optional secure element IC enables highly secure communication to the cloud such as Amazon AWS

#### 4. FCC/ISED Certified

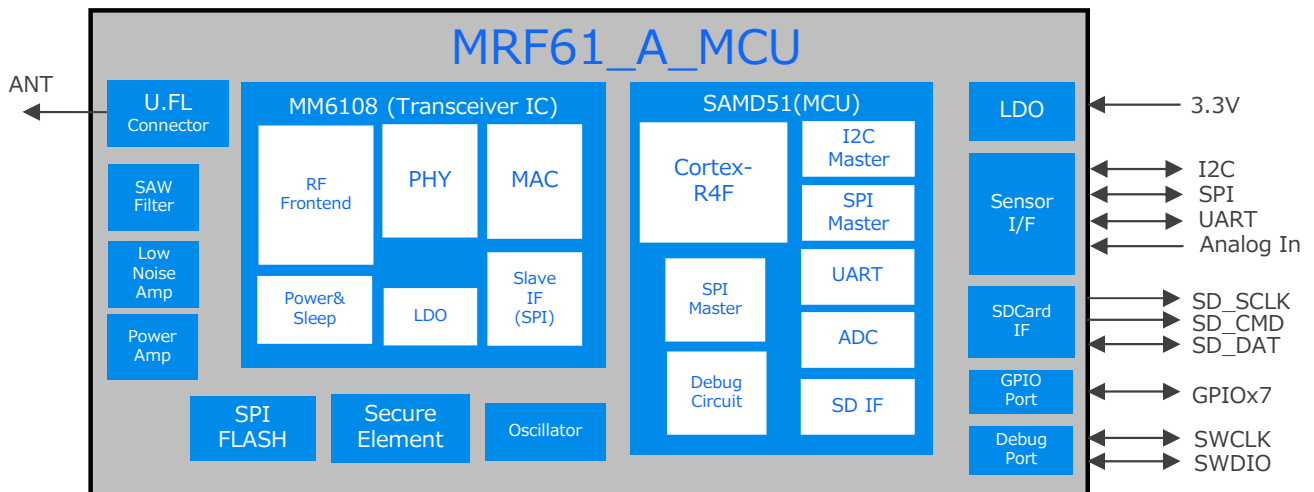
### ■ Top View

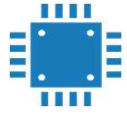


### ■ Specification

Wireless	IEEE802.11ah		Dimension	W:20mm x D:40mm x H:1.9mm
RF IC / MCU	Transceiver IC	MM6108 Morse Micro	Certification	FCC, ISED
	MCU	SAMD51 Microchip		
Interfaces	SDIO, SPI, I2C, I2S, UART, GPIO, ADC, DAC, PWM, COUNTER TCC, USB2.0		Antenna Connector	U.FL
			Secure Element IC	Optional
Data Rate	150K – 32.5Mbps		Max TX Power	20dBm
Range	>1km (0.62 mile)		Power Supply	3.3V
Mount Type	Surface Mount		Power Consumption	TBD
OS Support	Amazon Free RTOS		Operation Temp.	-40°C - 85°C

### ■ Block Diagram





## Wi-Fi HaLow™ MCU Evaluation Board

Part#: MRF61\_FI\_MCU\_DEV

An evaluation board for MRF61\_FI\_MCU module, featuring USB device interface, debug interface (SWD, UART), and mikroBUS™ for easy debugger/sensor connection.

### ■ Features

#### 1. USB device I/F

Supports UART-over-USB for SWD/UART debugging

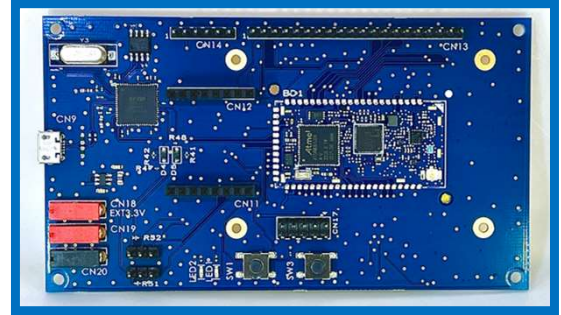
#### 2. mikroBUS™ Support

Popular mikroBUS™ interface accepts various mikroBUS™ sensor boards

#### 3. Additional Sensor I/F

20pin, 2.54mm pitch header supports I2C, SPI, UART and analog inputs

### ■ Top View



### ■ Specification

Wireless	IEEE802.11ah	Dimension	W:115mm x D:65mm x H:12mm
MCU Module	MegaChips MRF61_FI_MCU	Certification	FCC, ISED
I/O Interface	mikroBUS™ SPI, I2C, UART, Analog Input	Antenna Connector	U.FL (on the module)
		Power Supply	5.0V via USB Type-C Interface

### ■ Block Diagram

