

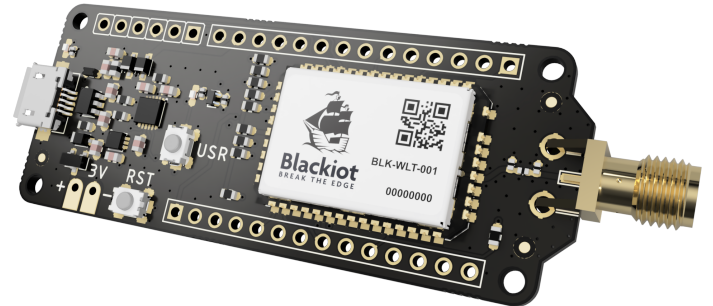
GENERAL DESCRIPTION

The **Vallarta** Ultra Low Power transmission module consists of STM32WL System-On-Chip that integrates both a general purpose microcontroller and a sub-GHz radio on the same chip.

The MKR board is an ideal solution for evaluating the module "on the field" in real world use cases.

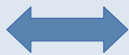
Use STM32Cube IDE and tools to develop your application.

Just add your sensors and a battery and deploy your LPWAN sensors solution.



STM32WL

STM32L4



SX126x

Target Applications:

- 24/7 always-on sensor processing at ultra-low power consumption.
- LPWAN data transmission over LORAWAN and SIGFOX™
- IoT Battery powered devices
- Smart metering, Industrial monitoring and control
- Home energy management systems, Smart parking, Wireless alarm systems, Asset tracking devices

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FEATURES

The **Vallarta** SOM and MKR evaluation board provide an ideal solution for low power sensors with LPWAN communication.

Hardware Features

MCU Core:

- ARM® Cortex®-M4 at 48 MHz
- 256-Kbyte Flash memory
- 64-Kbyte RAM
- 20x32-bit backup register
- OTA (over-the-air) firmware update capable
- -40 to 85°C operating temp.
- Voltage range 1.8 V to 3.6 V
- Low power modes down to 0.36 µA
- Run at < 72 µA / MHz
- 12 bit ADC up to 2.5 MSPS

RF Transceiver:

- Frequency range: 150 MHz to 960 MHz
- Modulation: LoRa®, (G)FSK, (G)MSK and BPSK
- RX sensitivity:
 - -123 dBm for 2-FSK (at 1.2 Kbit/s),
 - -148 dBm for LoRa®
- Transmitter high output power, up to +22 dBm
- Transmitter low output power, up to +15 dBm
- Active-mode RX: 4.82 mA
- Active-mode TX:
 - 15 mA at 10 dBm
 - 87 mA at 20 dBm (LoRa® 125 kHz)

Order Code	Description
BLK-WLT-MKR-XXXX	Vallarta MKR - LPWAN Eval. Board