Vallarta - LPWAN Transmission SOM

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.

STM32WL features a sub-GHz radio based-on Semtech SX126x to meet the requirements of a wide range of Low-Power Wide Area Network (LPWAN) wireless applications.

The module can be custom programmed with STM32Cube tools form STMicroelectronics enabling fast application development.

STM32WL
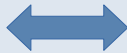
| STM32L4 | ↔ | SX126x |

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

BlackIoT Sagl

Via Stefano Franscini 2A

6833 Vacallo - Switzerland

CHE-192.005.916

info@blackiot.ch

www.blackiot.ch

Authorized Partner

life.augmented
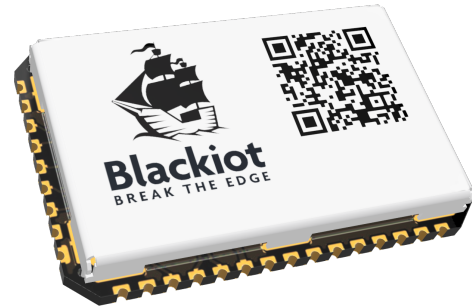
FEATURES

The **Vallarta** SOM provides 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)

Module:

- Size 22.86 x 15.24 mm
- Castellated contacts
- 47 pin + 8 ground pads

Order Code	Description
BLK-WLT-XXXX	Vallarta - LPWAN SOM