



BlackMoon MKR - Sub-GHz Eval. Board

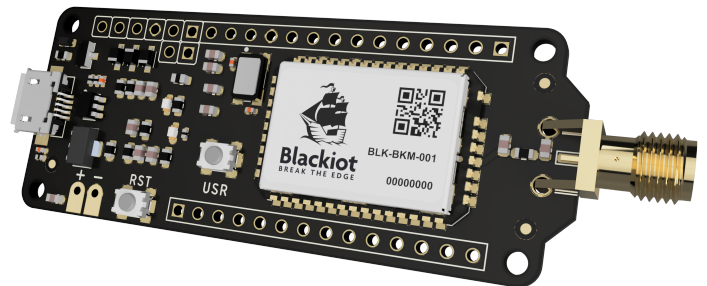
GENERAL DESCRIPTION

The **BlackMoon** Ultra Low Power transmission module consists of STM32L0 microcontroller unit with S2-LP high performance ultra-low power RF transceiver, intended for RF wireless applications in the sub-1 GHz band.

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.



FEATURES

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

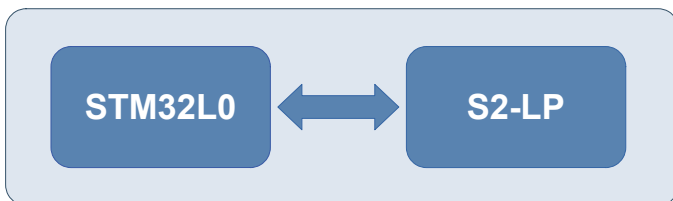
Hardware Features

MCU Core:

- ARM® Cortex®-M0+ at 32 MHz
- 128 kBytes Flash with ECC
- 20 kBytes RAM
- 6 kBytes of data EEPROM with ECC
- -40 to 85°C operating temp. (125 °C available)
- Voltage range 1.8 V to 3.6 V
- Low power modes down to 0.29 µA
- Run at 93 µA / MHz
- 12 bit ADC up to 1.14 MSPS

RF Transceiver:

- Frequency Bands:
 - 413-479 MHz
 - 826-958 MHz
- Modulation schemes:
 - 2(G)FSK, 4(G)FSK
 - OOK, ASK
- Air data rate from 0.1 to 500 kbps
- Ultra Low Power consumption:
 - 7 mA RX
 - 10 mA TX @ +10 dBm
- Receiver sensitivity: down to -130 dBm
- RF output power up to +16 dBm
- More than 145 dB RF link budget



Target Applications:

- 24/7 always-on sensor processing at ultra-low power consumption.
- LPWAN data transmission over SIGFOX™ and Monarch networks or 6LoWPAN / IEEE 802.15.4g networks
- 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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Order Code	Description
BLK-BKM-MKR-xxxxx	BlackMoonMKR - Sub-GHz EVK

