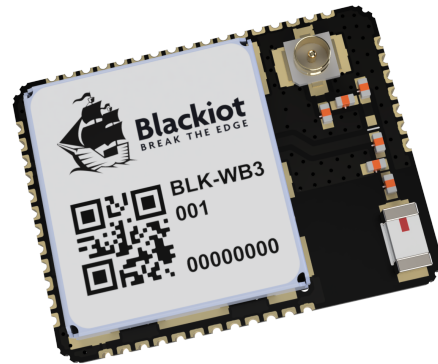


GENERAL DESCRIPTION

The **WildBay** Ultra Low Power transmission module consists of STM32WB35 System-On-Chip that integrates both a general purpose microcontroller and a 2.4 GHz radio on the same chip.

RF Transceiver supports Bluetooth® 5.2 specification, IEEE 802.15.4-2011 PHY and MAC, supporting Thread and Zigbee® 3.0 .

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



FEATURES

The **WildBay** SOM provides an ideal solution for low power sensors with 2.4 GHz communication.

Hardware Features

Dual Core MCU Core:

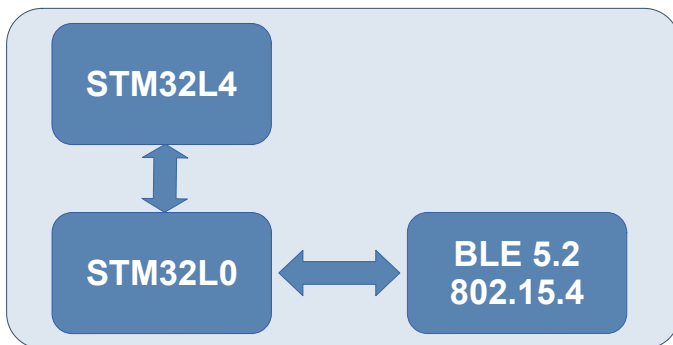
- ARM® Cortex®-M4 at 64 MHz
- ARM® Cortex®-M0+ at 32 MHz
- 512-Kbyte Flash memory
- 256-Kbyte RAM
- 20x32-bit backup register
- OTA (over-the-air) firmware update capable
- -40 to 85°C operating temp.
- Voltage range 1.71 V to 3.6 V
- Low power modes down to 0.36 µA
- Run at < 53 µA / MHz when RF and SMPS on
- 12 bit ADC up to 4.26 MSPS

2.4 GHz RF Transceiver:

- supporting Bluetooth® 5.2 specification
- IEEE 802.15.4-2011 PHY and MAC, supporting Thread and Zigbee® 3.0
- RX sensitivity:
 - -96 dBm (Bluetooth® Low Energy at 1 Mbps),
 - -100 dBm (802.15.4)
- Programmable output power up to +6 dBm with 1 dB steps
- Integrated balun to reduce BOM
- Support for 2 Mbps
- Dedicated Arm® 32-bit Cortex® M0+ CPU for real-time Radio layer

Module:

- Size 21 x 16 mm
- Castellated contacts
- 48 pin + 4 ground pads



Target Applications:

- 24/7 always-on sensor processing at ultra-low power consumption.
- BLE Networks
- Thread and Zigbee Mesh Networks
- IoT Battery powered devices
- Smart metering, Industrial monitoring and control
- Home energy management systems, Smart parking, Wireless alarm systems

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Order Code	Description
BLK-WB3-001	WildBay – 2.5 GHz SOM