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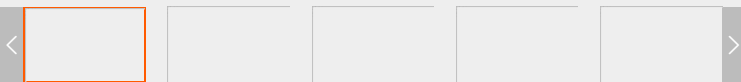
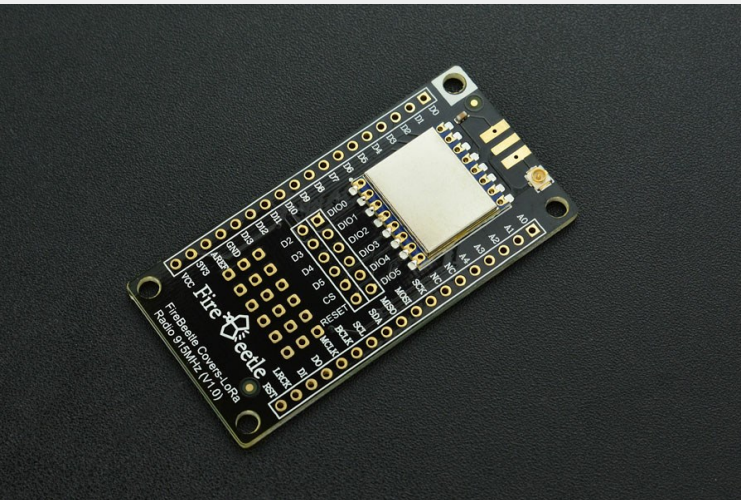
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EDUCATION

\$USD

WISH LIST

[Modules](#) / [Communications](#) / [Lora](#) / FireBeetle Covers-LoRa Radio 915MHz



FireBeetle Covers-LoRa Radio 915MHz

SKU:TEL0122

Brand:DFRobot

Reward Points: 179

* Model:

433MHz

868MHz

915MHz

Quantity:

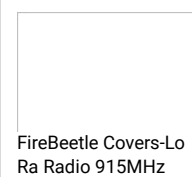
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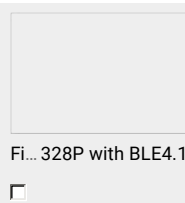


Frequently Bought Together

 $+$ 

Fir... (Supports Wi-Fi)

+



Fi... 328P with BLE4.1

+



FireBeetle Covers-



You have chosen:0
Total amount:

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INTRODUCTION

DFRobot FireBeetle series are low power consumption controllers designed for Internet of Things (IoT) development. The [FireBeetle series](#) are aiming straight at the point fast and convenient low-power IoT building. There are three categories of FireBeetle series, containing Boards (main control), Covers (expansion boards) and related Accessories.

FireBeetle LoRa 915MHz wireless transmission module adopts a high-performance chip SX127x LoRa 915MHz and with built-in PA (power amplifier) gain, compatible with Arduino. It supports long-range monitor, FSK modulation and the maximum transmission rate is 300K[null bps]. It also supports LoRaTM, the maximum transmission rate is 37.5Kbps. The circuit current is even lower than 0.2uA in the low power mode. It can be widely used in remote home automation detection, health monitoring and wearable device and so on.

[Lora tutorial](#) | [Getting started with lora](#) | [What is LoRa features](#) | [LoRa introduction](#) | [LoRaWAN](#)



NOTE: All parameters related to wireless signals in the same network should maintain consistency to avoid communication

Downloaded from Arrow.com.

SPECIFICATION

- Operating Current: 3.3V
- Operating Frequency: 915MHz
- Modulation Type: LoRaTM
- Output Power: ≤20dBm
- Receiving Sensitivity: -139dBm
- Emersion Current: ≤120mA
- Receiving Current: ≤15mA
- Sleep Current: ≤1uA
- Transmission Power Range: -1dBm~20dBm(Maximum)
- Transmission Mode: FIFO/ DMA
- Operating Frequency: 900MHz~1000MHz(typical value: 915MHz)
- Transmission Range: 1 Km
- Modulation Type: LoRaTM /FSK /GFSK /OOK
- Built-in aerials offer good anti-jamming capacity
- The Maximum RSSI is 127dB
- FIFO Volume: 256bytes
- Support CRC Frequency-hopping
- SPI Interface
- GPIO Interface: 5 (can be used as interruption)
- Operating Temperature: -20°C~+70°C
- Dimension: 58 x 29 mm/ 2.28 x 1.14 inches

DOCUMENTS

[Product wiki](#)
[More Documents](#)

SHIPPING LIST

- FireBeetle Covers-LoRa Radio 915MHz x1
- 18pin-2.54mm Pin Header x2
- 18pin-2.54mm Long Pin Header x2
- 915MHz Spring Antenna – IPEX x1
- SMA-KE Antenna Connector x1

REVIEW

FAQ

19 Comments DFRobot  Disqus' Privacy Policy  Login  Recommend  Tweet  Share Sort by Best

 n the discussion...

 **Brett Beeson** • 2 years ago

Hi! I have a Firebeetle 32 and Lora Radio 433MHz. This works well out of the box. I'm currently testing deep sleep power consumption (`esp_deep_sleep_start()`)

Without the LoRa board, I get 10uA as expected, in deep sleep.

With the LoRa board attached (ie. stacked on top), I get 20000uA (2mA). This occurs even if I don't use lora in the code (i.e. no `lora.init()`).

How can I configure things to achieve 10uA consumption with the lora board attached?

 • Reply • Share

 **DFRobot Support**  Brett Beeson • 2 years ago

This is because the LORA module itself needs to consume current, so you can try to control the module power supply.



Brett Beeson → DFRobot Support • 2 years ago

Yes, that makes sense. So, *how* do "control the module power supply"? Is this a software or hardware (or both?) approach? Thanks, Brett.

^ • Reply • Share >



DFRobot Support Mod → Brett Beeson • 2 years ago

You can change the power input by hardware.

^ • Reply • Share >



Brett Beeson → DFRobot Support • 2 years ago • edited

Ok, can you elaborate please?

The board, as supplied, does not achieve the advertised "Sleep Current: $\leq 1\mu\text{A}$ ". This is disappointing.

I've moved the discussion to the forum.

^ • Reply • Share >



DFRobot Support Mod → Brett Beeson • 2 years ago

What is the power consumption test method you use? The power consumption that we tested was less than 1uA.

^ • Reply • Share >



Brett Beeson → DFRobot Support • 2 years ago

I tested the power consumption by putting a DMM inline with the battery. This normally works well. It shows 10uA for the ESP32 in deep sleep, but 20000uA for the ESP32+Lora in deep sleep.

What was your setup to test? What code did you run?

See more details on **the forum**, including a sample setup/code to test. Might be more valuable to discuss there?

^ • Reply • Share >



Martin → Brett Beeson • 2 years ago

Is this working as intended? I'd like to use Lora board and fireb.esp32 together, but if I can't achieve a low energy consumption when my lora board is connected is useless for me.

^ • Reply • Share >



Brett Beeson → Martin • 2 years ago

Hi Martin. Unfortunately not. I can't get consumption down so it's also useless to me. I've had no solution (or follow up reply) from DFRobot. I think I'll have to buy a bare LoRa module instead.

^ • Reply • Share >



Martin → Brett Beeson • 2 years ago

Thanks **@Brett Beeson** . I'll test one fireb. esp32 and get a bare LoRa module aswel

^ • Reply • Share >



Emilio Esteban Cifuentes Opitz • 3 years ago

Hello, you have an antenna like the one shown in this product (<https://www.dfrobot.com/pro...>, image 4)

^ • Reply • Share >



DFRobot Support Mod → Emilio Esteban Cifuentes Opitz • 3 years ago

No, this module doesn't have external antenna, if you want to use that product, it is compatible with Firebeetle.

^ • Reply • Share >



Geert Vansintjan • 3 years ago

How do you attach the cover if you build on a esp32 and a firebeetle gravity expansion shield?

^ • Reply • Share >



DFRobot Support Mod → Geert Vansintjan • 3 years ago

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