

FireBeetle ESP32 IoT Microcontroller

DFR0478

Product Overview

6/16/2022

For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

DFRobot FireBeetle ESP32 IoT Microcontroller is the low-power consumption micro-controller designed for Internet of Things (IoT) projects. This board integrates a dual-core ESP-WROOM-32 module, which supports Wi-Fi and Bluetooth® dual-mode communication. The FireBeetle ESP32 IoT microcontroller has a 10μA electric current in the deep-sleep mode and the main controller supports USB and 3.7V external lithium battery power supply methods.



The FireBeetle ESP32 IoT microcontroller has a special hardware design for Arduino IDE to make a download without switching boot mode manually. This board supports Arduino, IDF (Linux), micropython, and is compatible with Arduino UNO.

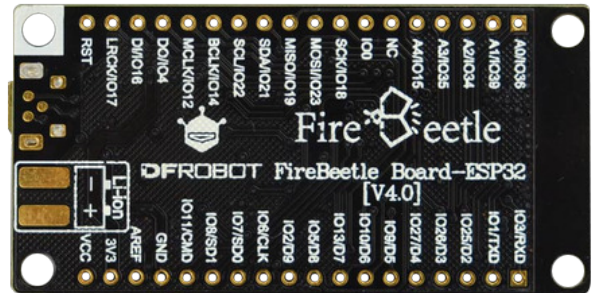
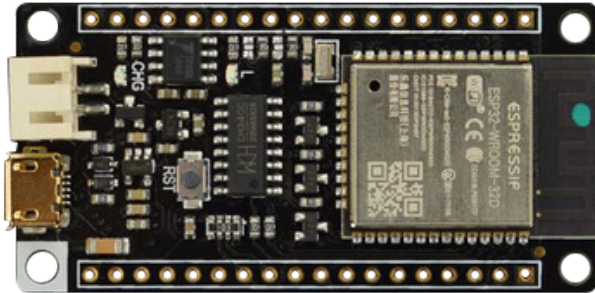
Features

- Compatible with products in the DFRobot FireBeetle serials
- Low-power consumption (the electricity current under ultra-low-power is 10μA)
- Quick response (the top frequency is 400KHz)
- Cost-effective
- Small size and convenient to install

Specifications

- 3.3V working voltage
- 3.3V to 5V input voltage range
- 10µA electric current in the deep-sleep mode
- Supports 600mA maximum discharge current
- Supports 500mA maximum charge current
- Supports USB charging
- 240MHz CPU frequency
- 520KB SRAM
- 16MB flash
- Tensilica LX6 dual-core processor (one for high-speed connection and one for independent programming)
- FCC/CE/TELEC/KCC Wi-Fi standard
- 802.11 b/g/n/d/e/l/k/r (802.11n, high speed can reach 150 Mbps), converge A-MPDU and A-MSDU, supporting 0.4us protecting interval
- 2.4GHz to 2.5GHz frequency range
- Comply with BR/EDR/BLE standard of Bluetooth v4.2
- 80mA working current
- Supports one-key downloading
- Supports micropython
- On-chip clock:
 - 40MHz crystal
 - 32.768KHz crystal
- 10 digital I/O (default setting of Arduino)
- 5 simulative inputs (default setting of Arduino)
- SPI: 1 (default setting of Arduino)
- I2C: 1 (default setting of Arduino)
- I2S: 1 (default setting of Arduino)
- D9 LED_BUILTIN
- -40°C to 85°C working temperature
- 29mm × 58mm dimensions

Board Overview



Mouser Part Number

[View Part](#)

To learn more, visit <https://www.mouser.com/new/dfrobot/dfrobot-firebeetle/>