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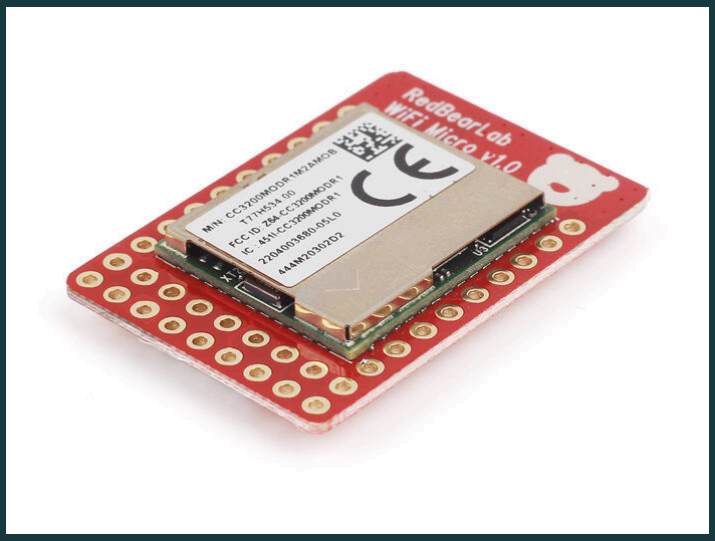
INDUSTRIAL PRODUCT DATASHEET

Wi-Fi Micro

CC3200-based Wi-Fi development board with dual-core MCU, OTA updates, low-power modes, and Arduino-like programming via Energia.

SKU	UPDATED	PRICE
114990336	2024-08-09 01:54:46	$14.00(Excl. VAT)



Overview



The RedBearLab Wi-Fi Micro is based on the TI CC3200, the industry's first single-chip ARM Cortex-M4 MCU with integrated Wi-Fi, enabling rapid IoT prototyping without prior Wi-Fi experience. It features a dual-core architecture (application and Wi-Fi network processor), OTA firmware updates, low-power hibernate mode (<1 μA), multiple interfaces, and supports programming via Energia IDE with cloud integration.

Key Features

The RedBearLab Wi-Fi Micro is made based on CC3200 module by Texas Instruments (TI). The target MCU is TI CC3200, the industry's first single-chipARM Cortex-M4 core MCU with built-in Wi-Fi connectivity. With on-chip Wi-Fi, Internet, and robust security protocols, no prior Wi-Fi experience is required for faster development. They are offered to make you quickly produce prototypes and demos target for not only Internet of Thing (IoT) but also many other exciting and interesting projects. Such as Wi-Fi camera, Wi-Fi Audio, TFTP Client, TCP/IP OR UDP Server/Client, Http Server, XMPP Client, mDNS, etc.

Features

- TI CC3200 Dual core MCU: An ARM Cortex-M4 core at 80 MHz for application and a dedicated ARM core for Wi-Fi Network Processing
- Industry's first sully certified Wi-Fi module including FCC, IC, CE, ETSI, TELEC, and Wi-Fi Alliance
- Easy Wi-Fi setup using TI’S Smart Config, Soft AP or WPS2
- Over the Air (OTA) download application firmware from other Wi-Fi device or Internet
- A lot of application examples provide by TI
- TI-RTOS and Free-RTOS supported
- Wide range of supply voltages and low-power consumption, less than 1uA current in hibernate mode
- IoT Cloud platform integration ready including 2lemetry, Arrayent, Exosite, IBM, Temboo & Xively
- You can program our boards with Arduino like syntax using Energia, an open-sourceed version of the Arduino IDE for TI MCU
- This is without MK20 USB board version, if you need it, please visit **Wi-Fi Micro Kit**.

CC3200 Wi-Fi consists of applications microcontroller, Wi-Fi network processor, and power-management subsystems:

Applications Microcontroller Subsystem

- ARM Cortex-M4 Core at 80 MHz
- 256KB RAM, 1MB serial flash memory with file system for user
- Hardware Crypto Engine for advanced fast security, including AES, DES, 3DES, SHA2 MD5, CRC and Checksum
- Up to 27 individually programmable, multiplexed GPIO pins, including a fast parallel camera interface, I2S, SD/MMC, UART, SPI, I2C, and dour-channel ADC

Wi-Fi Network Processor Subsystem

- Dedicated ARM MCU, completely offloads Wi-Fi and Internet protocols from the applications microcontroller
- 802.11 b/g/n radio
- WPA2 personal and enterprise security
- Station, access point, and Wi-Fi direct modes
- Powerful crypto engine for fast, secure Wi-Fi and internet connections with 256 bit AES encryption for TLS and SSL connections

- SmartConfig technology, AP mode and WPS2 for easy and flexible Wi-Fi provisioning

The power-management subsystem includes integrated DC-DC converters supporting a wide range of supply voltages. This subsystem enables low-power consumption modes, such as the hibernate with RTC mode requiring less than 7uA of current.

Specification

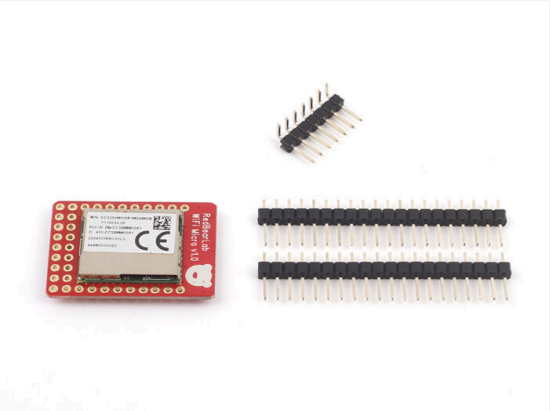
Part List

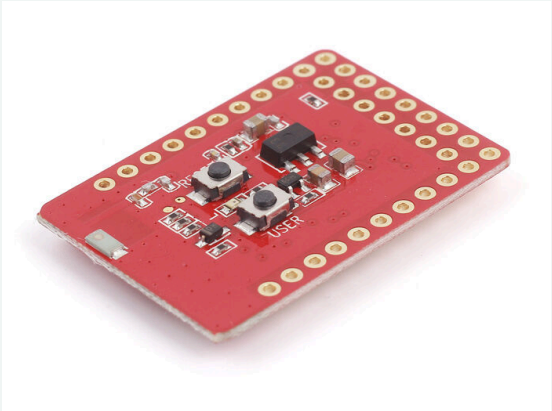
- Wi-Fi Micro x 1

We have prepared a detail guide **Getting Started with RedBearLab Wi-Fi Micro** to show you how to upload firmware to Wi-Fi Micro using Energia IDE.

For any technical support or suggestion, please kindly go to our **forum**.

Product Gallery





Specification

Microcontroller	TI CC3200
Operating Voltage	2.3V to 3.6V
Input Voltage	A: 2.3V - 3.6V B: 3.3V - 5.5V (VIN) Cause: Use either one power source at a time, otherwise you will damage the board.
Clock Speed	80MHz
Connectivity	Wireless LAN (802.11 b/g/n @2.4GHz) Micro USB (CDC, virtual COM port) Serial (TX/RX) I2C SPI Parallel Camera I2S SD/MMC
Flash Memory	1MB (External Flash in Module)
I/O Pins	27

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Compliance & Logistics

HSCODE	8543909000

Resource Links

- https://www.seeedstudio.com/Wi-Fi-Micro-p-2563.html

Seeed Technology Co.,Ltd.
9F, Building G3, International E City,
Zhongshanyuan Road, Nanshan, Shenzhen, China

Tel: +86 0755-80695676
Web: www.seeed.cc
Shop: www.seeedstudio.com