



Shenzhen Xinzhongxin Technology C-2L WiFi and BLE Module Instructions

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Introduction

C-2S integrates Bluetooth dual-mode 5.1 and Wi-Fi 802.11n chip. It integrates the hardware and software required to complete the Wi-Fi and Bluetooth applications, support AP and STA connection, as well as the classic Bluetooth and BLE connection at the same time. The 32-bit MCU with Max running speed of 120 MHz and the built-in 256 KB RAM allow it to support multi cloud connection, and the MCU can also support audio decoding.

It has variety of peripherals, such as PWM, I2C, UART, SPI, SDIO and IrDA. You can download and burn the program directly through UART. Up to six channels of 32-bit high-speed PWM output make it suitable for high-quality LED control. Every 2 PWM can be configured as a phase controllable differential mode to support motor and LED strip.

Priority based Wi Fi and Bluetooth coexistence control module is integrated internally to support real-time priority and transceiver scheduling. BK7231M can provide the indication of transceiver status of the current transceiver, so as to support external PA and LNA expansion.

It is embedded with EFUSE and supports OTP reading and writing in flash. It can be used to provide unique serial number, code encryption and protect the security of debugging interface. The internal integration of true random number generator and security module ensures the security of communication and fast authentication and

network connection.

Support low-power sleep mode, MCU can enter sleep mode and only needs micro ampere current. The deep sleep mode supported by BK7231M can run a 32-bit clock under several microamps of current, and can be awakened by this clock or any GPIO.

It supports not only the classic Bluetooth standard rate connection, but also all BLE 5.1 rates and functions, including Long Range High Data Rate and AOA / AOD positioning with up to four antennas.

Features

- 802.11 b/g/n 1×1 Compliant
- 20/40 MHz bandwidth and STBC
- Working mode STA, AP, Direct and Repeater
- SGI Green-Field Preamble and A-MPDU
- Support WPA, WPA2 and WAPI
- Support 802.11e and WMM-PS
- Up to 120 MHz for ARM968E-S MCU
- In package 2Mbyte FLASH
- On chip 256 Kbyte data RAM
- 50 MHz SDIO interface and SPI
- Full speed USB host and device
- Dual high speed UART
- High speed I2C
- Multi-channel 10bit ADC
- Six 16-bits timer with PWM mode
- Clock signal output
- **FCC standards:** FCC CFR Title 47 Part 15 Subpart C Section 15.247
- PCB antenna with antenna gain 0dBi

FCC Statement

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module **FCC ID: 2AG94C-CB2L** Or Contains **FCC ID: 2AG94CCB2L**" When the module is installed inside another device, the user manual of the host must contain below warning statements;

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
 1. This device may not cause harmful interference.
 2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.


However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.

Documents / Resources

<div><div><div><div><div><div></div><div>SHENZHEN XINZHONGXIN TECHNOLOGY CO., LTD.</div></div></div><div><div><div>C-2L</div><div>(C-2L, CCB2L, 2AG94C)</div></div><div><p>1. Product Description: C-2L is a 2.4GHz/5GHz dual-band WiFi and BLE module, supporting IEEE 802.11b/g/n/ax and Bluetooth 5.0. It is designed for low-power, high-performance applications. The module is compatible with various operating systems and can be easily integrated into different hardware designs.</p><p>2. Features:</p><ul style="list-style-type: none">• Dual-band operation (2.4GHz/5GHz)• High-speed data transfer (up to 1.2Gbps)• Low power consumption (typical 10mA)• Support for IEEE 802.11b/g/n/ax and Bluetooth 5.0• Small form factor (SMD package)• Wide temperature range (-40°C to +85°C)• RoHS compliant<p>3. Applications:</p><ul style="list-style-type: none">• Smart home devices• Industrial automation• Wearable devices• IoT sensors• Mobile devices<p>4. Package Information:</p><ul style="list-style-type: none">• Package type: SMD• Pin configuration: 16 pins• Dimensions: 10mm x 10mm x 1mm<p>5. Contact Information:</p><p>Shenzhen Xinzongxin Technology Co., Ltd. Address: No. 1, Xixiang Road, Xixiang, Shenzhen, Guangdong, China Tel: +86 755 2666 6666 Email: sales@xinxongxin.com</p></div></div></div></div></div>	<div><div><div><div><div><div>Shenzhen Xinzongxin Technology C-2L WiFi and BLE Module</div><div>[pdf] Instructions</div></div></div><div><div><div>C-CB2L, CCB2L, 2AG94C-CB2L, 2AG94CCB2L, C-2L WiFi and BLE Module, WiFi and BLE M</div><div>odule</div></div></div></div></div></div>
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