

# CKT02J Bluetooth module Hardware specifications

## 一、Module is introduced

The Bluetooth module adopts JIELI AC6966 chip scheme, and communicates with other devices through a serial port. It is equipped with different carriers to achieve different functions, including BLE bluetooth transparent transmission, classical Bluetooth music playback, and voice prompts playback (such as Norflash, SD card, etc.).

## 二、Hardware parameters

1. Power: 2.2V~5.5V
2. Communicationg interface: UART
3. Maximum operating current: <40mA
4. Current power consumption in soft off mode: 3uA
5. Chip packaging: QFN32(4mm\*4mm)

## 三、Module model and parameters

### 1、CKT02J

- ① As shown in Figure 1 below, CKT02J is the stamp hole packaging, defined as shown in Figure 1 below.
- ② VBAT typical voltage value is 5V, BT\_R and BT\_L left and right channel stereo.
- ③ Its size is 25\*18\*1mm

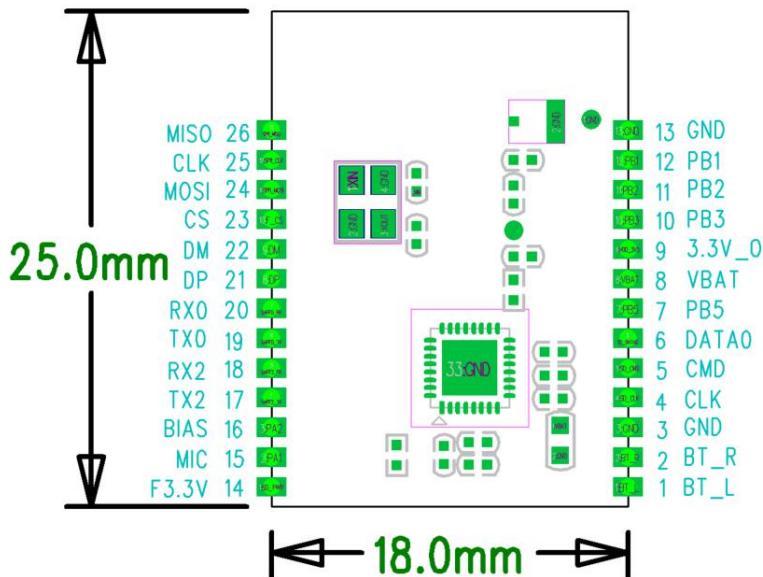


图1 CKT02J Pin figure



图 2 CKT02J Real Picture

#### 四、Specific Pin Definition

PIN NO.	Name	I/O Type	Drive (mA)	Function	Other Function
1	DACL	O	/		DAC Left Channel
2	DACR	O	/		DAC Right Channel
3	DACVSS	P	/		DAC Ground
4	PB7	I/O	24/8	GPIO	SD0CLK_BF: SD0Clock(BF) AMUX1R : Analog Channel1Right; SPI2DOA: SPI2 Data Out(A); IIC_SDA_C: IIC DAT(C); ADC9 : ADC Input Channel 9; PWM5: Timer5 PWM Output; UART1RXA: Uart1 Data In(A);

5	PB6	I/O	24/ 8	GPIO	AMUX1L : Analog Channel1 Left; SPI2CLKA: SPI2 Data Out(A); IIC_SCL_C: IIC SCL(C); ADC8 : ADC Input Channel 8; TMR3: Timer3 Clock Input; UART1TXA: Uart1 Data Out(A);
6	PB4	I/O	24/ 8	GPIO	SPI0_DAT2A(2): SPI0 Data2 Out_A(2); ADC7 : ADC Input Channel 7; CLKOUT1 UART2TXC: Uart2 Data Out(C); UART2RXC: Uart2 Data In(C);
7	LDO_IN	P	/		Battery Charger In
	PB5	I/O	8	GPIO (High Voltage Resistance)	SPI2DIA: SPI2 Data Input(A); PWM3 : Timer3 PWM Output ; CAP1 : Timer1 Capture; UART0TXC: Uart0 Data Out(C); UART0RXC: Uart0 Data In(C);
8	VBAT	P	/		Battery Power Supply
9	VDDIO	P	/		IO Power 3.3v
10	PB3	I/O	/	GPIO	SD0DAT_D: SD0 Data(D); ADC6: ADC Input Channel 6; PWM2: Timer2 PWM Output; UART2RXB: Uart2 Data In(B);
11	PB2	I/O	8	GPIO(High VoltageResistan ce)	SD0CMD_D: SD0 Command(D)SPI1DIA: SPI1 Data In(A);CAP0: Timer0 Capture;UART2TXB Uart2 Data Out (B)
12	PB1	I/O	24/8	GPIO(pull up)	SPI1DOA: SPI1 Data Out(A);ADC5: ADC Input Channel 5;TMR2: Timer2 Clock Input;UART0RXB: Uart0 Data In(B);SPDIF_IN_D: Sony/Philips Digital Interface Input(D)
13	DACVSS	P	/		DAC Ground
14	PA0	I/O	/		SDPG: SD Power SupplyALNK_DAT0_A: Audio Link Data0_A;ALNK_DAT0_B: Audio Link Data0_B;ADC0: ADC Input Channel 0;CLKOUT0 UART1TXC: Uart1 Data Output(C);

15	PA1	I	24/8		MIC: MIC Input Channel ;ADC1: ADC Input Channel 1;PWM4: Timer4 PWM Output; UART1RXC: Uart0 Data In(C);
16	PA2	I/O	24/8	GPIO	SD0CLK_C: SD0 Clock(C);MIC_BIAS: Microphone Bias Output ALNK_MCLK_A: ALNK Master Clock_A; ALNK_DAT1_B: Audio Link Data1_B; CAP3: Timer3 Capture;
17	PA3	I/O	24/8		SD0DAT_C: SD0 Data(C); AMUX0L: Analog Channel0 Left;PLNK_SCLK: PLNK Serial Clock; ALNK_SCLK_A: Audio Link Serial Clock(A); ALNK_DAT2_B: Audio Link Data2_B;UART1_CTS: Uart1 Clear to send; ADC2: ADC Input Channel 3;PWM5: Timer5 PWM Output; UART2TXA: Uart1 Data Output(D);
18	PA4	I/O	24/8	GPIO	SD0CMD_CE: SD0 Command(CE) AMUX0R: Analog Channel0 Right; PLNK_DAT1: PLNK Data1; ALNK_LRCK_A: Audio Link Word Select(A); ALNK_DAT3_B: Audio Link Data3_B;UART1_RTS: Uart1 Request to send; ADC3: ADC Input Channel 3;TMR4: Timer4 Clock Input; UART2RXA: Uart2 Data In(A);
19	PA5	I/O	24/8		ALNK_DAT2_A: Audio Link Data2_A;ALNK_SCLK_B: Audio Link Serial Clock(B);IIC_SCL_D: IIC SCL(D);PWM0: Timer0 PWM Output; UART0TXA: Uart0 Data Output(A); SPDIF_IN_A: Sony/Philips Digital Interface Input(A)
20	PA6	I/O	24/8		ALNK_DAT3_A: Audio Link Data3_A;ALNK_LRCK_B: Audio Link Word Select(B);IIC_SDA_D: IIC SDA(D);ADC4: ADC Input Channel 4;CAP4: Timer4 Capture;UART0RXA: Uart0 Data In(A);SPDIF_IN_B: Sony/Philips Digital Interface Input(B)
21	USBDP	I/O	4	USB PositiveData(pull down)	SPI2CLKB: SPI2 Clock(B);IIC_SCL_A: IIC SCL(A);ADC13: ADC Input Channel 13;UART1TXD: Uart1 Data Output(D)

22	USBDM	I/O	4	USB NegativeData(pull down)	SPI2DOB: SPI2 Data Out(B);IIC_SDA_A: IIC SDA(A);ADC14: ADC Input Channel 14;UART1RXD: Uart1 Data In(D);
23	PC2	I/O	24/8		SPI0_DIB(1): SPI0 Data Input(B); ALNK_MCLK_B: ALNK MasterClock(B); ADC10: ADC Input Channel 10;CAP5: Timer5 Capture;UART1RXB: Uart1 Data In(B);
24	PC3	I/O	24/8	GPIO	SD0DAT_A: SD0 Data(A);SPI0_DAT2B(2): SPI0 Data2(B); SPI1DIB: SPI1 Data In(B);CAP2: Timer2 Capture;UART0TXD: Uart0 Data Out (D); UART0RXD: Uart0 Data In(D);
25	PC4	I/O	24/8	GPIO	SD0CMD_A: SD0 Command(A);SPI0_DAT3AB(3): SPI0 Data3(AB); SPI1CLKB: SPI1 Clock(B);IIC_SCL_B: IIC SCL(B);ADC11: ADC Input Channel 11;PWM1: Timer1 PWM Output; UART2TXD: Uart2 Data Out (D);
26	PC5	I/O	24/8	GPIO	SD0CLK_AE: SD0 Clock(AE);SPI1DOB: SPI1 Data Out(B);IIC_SDA_B: IIC SDA(B);ADC12: ADC Input Channel 12;TMR1: Timer1 Clock Input;UART2RXD: Uart2 Data In(D);

### **FCC Warning:**

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.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

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

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

The device has been evaluated to meet general RF exposure requirement. The device can be used installed and operated with minimum distance 0mm between the radiator and your body.

### **Important Note:**

In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

### **End Product Labeling**

The final end product must be labeled in a visible area with the following " Contains FCC ID: 2A6LO-CKT02J ".

### **Manual Information to the End User**

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

## **Integration instructions for host product manufacturers according to KDB 996369 D03 OEM Manual v01**

### **2.2 List of applicable FCC rules**

CFR 47 FCC PART 15 SUBPART C has been investigated. It is applicable to the modular transmitter

### **2.3 Specific operational use conditions**

This module is stand-alone modular. If the end product will involve the Multiple simultaneously transmitting condition or different operational conditions for a stand-alone modular transmitter in a host, host manufacturer have to consult with module manufacturer for the installation method in end system.

### **2.4 Limited module procedures**

This module is Limited single modular without shielding, host manufacturer have to consult with module manufacturer for the module limiting conditions when integrate the module in the host. module manufacturer should reviews detailed test data or host designs prior to giving the host manufacturer approval.

### **2.5 Trace antenna designs**

Not applicable

### **2.6 RF exposure considerations**

The device has been evaluated to meet general RF exposure requirement. The device can be used installed and operated with minimum distance 0mm between the radiator and your body.

### **2.7 Antennas**

This radio transmitter FCC ID: 2A6LO-CKT02J has been approved by Federal Communications Commission to operate with the antenna types listed below, with the maximum permissible gain indicated. Antenna types not included in this list that have a gain greater than the maximum gain indicated for any type listed are strictly prohibited for use with this device.

Antenna No.	Operate frequency band	Antenna Type	Maximum antenna gain
Bluetooth	2400-2500MHz	PCB Antenna	0dBi

### **2.8 Label and compliance information**

The final end product must be labeled in a visible area with the following" Contains FCC ID:2A6LO-CKT02J".

### **2.9 Information on test modes and additional testing requirements**

Host manufacturer which install this modular with single modular approval should perform the test of radiated emission and spurious emission according to FCC part 15C:15.247 and 15.209 requirement, only if the test result comply with FCC part 15.247 and 15.209 requirement, then the host can be sold legally.

### **2.10 Additional testing, Part 15 Subpart B disclaimer**

Host manufacturer is responsible for compliance of the host system with module installed with all other applicable requirements for the system such as Part 15 B.