

Operational principle

1. CPU,U2,BC413159A11: CSR BlueCore-04-Audio-rom BC413159A11QFN,

①Key Features

Radio

- Operation with common TX/RX terminal simplifies external matching circuitry and eliminates external antenna switch
- Bist minimizes production test time
- No external trimming is required in production
- Full RF reference designs are available
- Bluetooth V2.0+EDR specification compliant

②Transmitter

- +6dBm RF transmit power with level control from on-chip 6-bit DAC over a dynamic range >30dB
- Supports Class 2 and Class 3 radios without the need for an external power amplifier or TX/RX switch
- Support Class 1 radio with an external power amplifier provided by a power control terminal controlled by an internal 8-bit voltage DAC and an external RF TX/RX switch

③Receiver

- Integrated channel filters
- Digital demodulator for improved sensitivity and co-channel rejection
- Digitized RSSI available in real time over the HCI interface
- Fast AGC for enhanced dynamic range

④Synthesizer

- Fully integrated synthesizer, no external VCO varactor diode or resonator
- Compatible with crystals between 8 and 32MHz (in multiples of 250KHz) or an external clock

⑤Baseband and software

- Internal 6Mbit ROM
- Internal 48kb RAM to support EDR..allows full speed Bluetooth data transfer, mixed voice and data and full piconet operation
- Logic for forward error correction, header error control, access code correlation, CRC,demodulation, encryption bit-stream generation, whitening and transmit pulse shaping
- Transponders for A-law, μ -law and linear voice from host and A-law, μ -law and CVSD voice over air

⑥Physical Interfaces

- Synchronous serial interface up to 4Mbaud for system debugging
- UART interface with programmable Baud rate up to 3Mbaud with an optional bypass mode
- Full speed USB v1.1 interface supports OHCI and UHCI host interfaces. Compliant with USB v2.0-optional I²CTM compatible interface

⑦Audio Codec

- 15-bit resolution, 8KHz sampling frequency
- Digital enhancements to add bass cut,side tone and treble boost
- Analogue enhancements to support single-ended speaker drive capability and reference

availability

⑧Operation Principle:

Low power 1.8v operation

Operation clock is provided by 16MHz oscillator.

2. EEPROM ,U1, CAT24C32, 32kb I²C CMOS serial eeprom.It is used to store the normal and test firmware.
3. power supply:3.7V Recharger Lithium battey,U3 2.7VLDO Voltage to micphone
4. D1,Power on Shine RED LED;D2 Turn off shineGREEN LED
5. ANT (Metal) S4 DBF71B191 are 2.4GHz ISM Match part.