Wireless Audio

Wireless Audio is a new product developed in recent years. Mate with it, the traditional Speakers, Headphones, Microphones, and other excisting products, all can become wireless. Compared with the technique of bluetooth, AppoTech's Wireless audio have the advantages of higher quality timbre, longer distance, and lower power consumption, thus it can be used as the bluetooth replacement in some applications.

AppoTech's Wireless Audio Solution

Our experts have developed an advanced wireless audio solution, which is a system of a 2.4GHz RF module and AX series audio processor (AX1003, AX2002). The transmitter supports various audio data interface such as IIS Codec, USB audio, and direct analog…etc. Customers can merge this advanced solution with our AX series processors for different wireless audio designs. And with the base of wireless audio, we are developing the wireless video for the wireless transmission of multimedia in the near future.

General Features

- 2.4GHz RF Digital
- ADPCM compression arithmetic.
- Support ARQ and FEC
- Up to 100M（L.O.S） communication distance at low power condition (less than 60mA)
- High S/N ratio(Signal Noise Ratio), up to 85dB (with 0.3% distortion degree)
- 44.1KHz audio frequency data sampling rate,16 bit precision, stereo
- Supports various audio data interface: IIS Codec, USB audio, direct analog

Advantages

- **Low cost & High performance**
- **Single-chip solution (build-in baseband, IIS interface, audio compression & decompression engine)**
- **Good RF noise rejection from Bluetooth, 802.11(Wi-Fi), microwave ovens and mobile phones**
- **High quality stereo music**
- **Reference designs and can be modified according to customer's needs**

Applications

- Wireless Satellite Speakers for 5.1 & 7.1 Speakers
- Wireless Speakers for MP3, ipod
- Wireless Karaoke Microphones
- Wireless Handsets
- Educational / Learning Audio Systems

Solution 1 (AX1003+RF module)

- Use AX1003 as the main control device of the receiver and sending port
- Support analog and digital audio input
- Timbre: double track, 44.1KHz audio frequency data sampling rate, 16 bit precision, stereo
- Transmission distance: 15M – 30M (indoor), and up to 100M (outdoor).
- Good noise rejection from Bluetooth, 802.11(Wi-Fi), microwave ovens and mobile phones
- Audio compression and decompression engine
- Baseband processing (ARQ, FEC)
- Digital audio interface：IIS Codec，USB audio

Unit 110 – 111, 1/F, IC Development Centre, No.6 Science Park West Ave.,
Hong Kong Science Park, Shatin, N.T., Hong Kong
Tel: 852-26074090 Fax: 852-26074096

Solution 2 (AX2002+RF module)

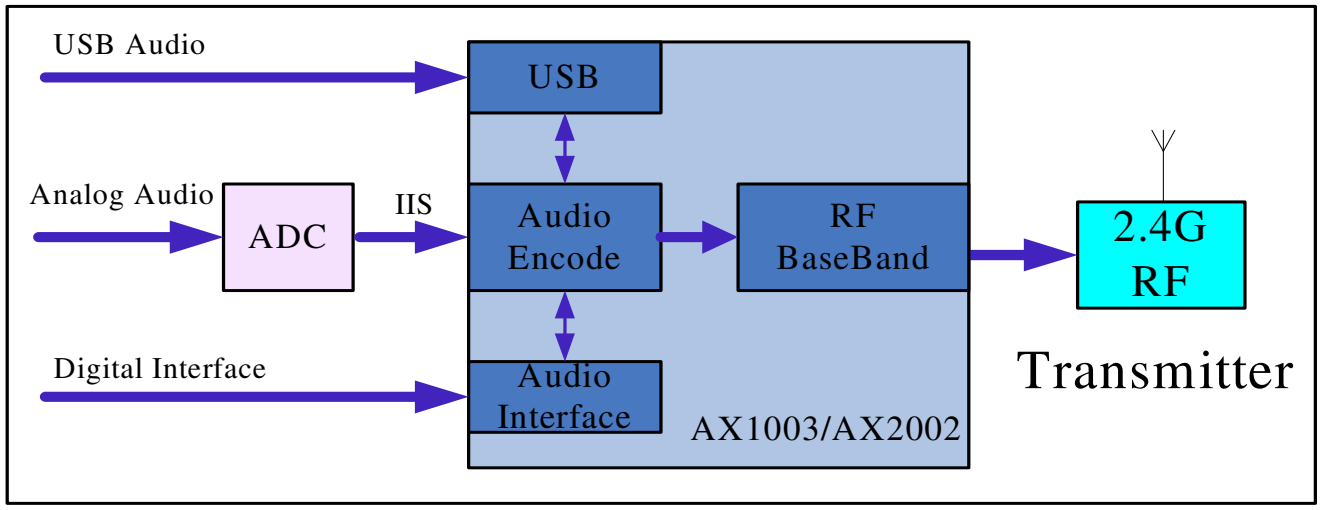
Same features as solution 1

Additional Advantages:

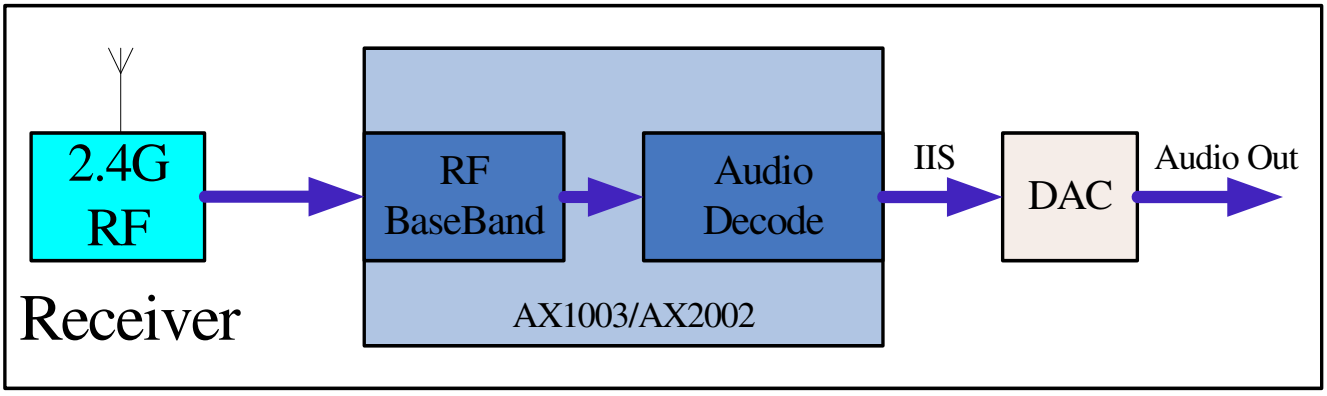
- Lower power consumption with the average about 78mA, especially when applied to wireless headphones
- Higher performance and speed: 144 MIPS
- With RF drive module
- With Baseband processing module
- With DSP accelerator for special audio effect processing
- Reference designs and can be modified according to customer's needs

Solution Diagram（AX1003/AX2002+RF module）

Transmitter



Receiver



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