BES2810ZP

Brief Datasheet

Ultra-low Power AI Bluetooth Audio Platform

CONTACT US:

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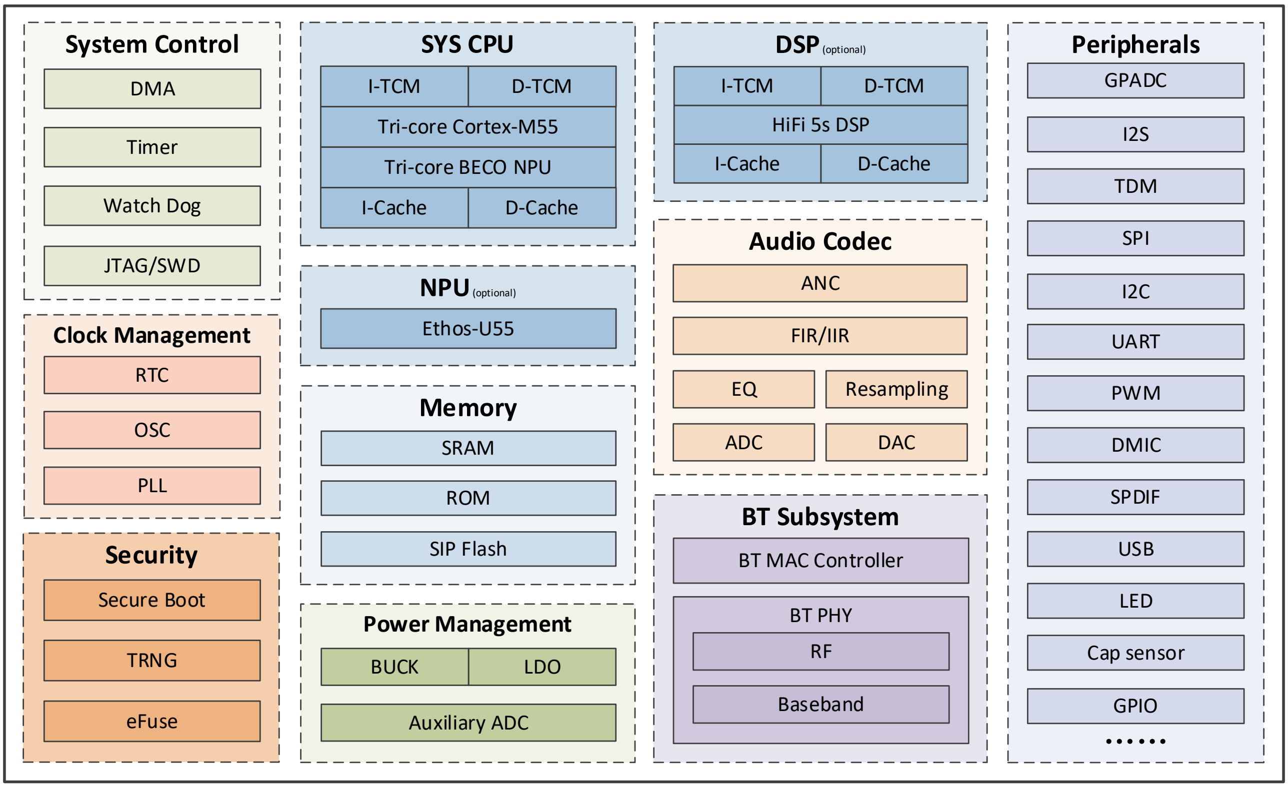
DISCLAIMER:

1 General Description

The BES2810ZP is an ultra-low power, high performance, smart Bluetooth audio SoC. The platform incorporates a powerful CPU subsystem comprising a tri-core Arm Cortex-M55 processor with a tri-core BES proprietary coprocessor (BECO NPU) for advance signal processing and NN workloads, a Tensilica HiFi 5s DSP (optional), an audio codec subsystem, as well as an Ethos-U55 NPU (optional). This combination significantly reduces power consumption while providing substantial application processing capabilities, ideally for spatial audio processing.

The platform incorporates a dual-mode Bluetooth 6.1 subsystem for both Bluetooth classic and LE audio. The highly integrated solution is optimized through the use of IBRT technology, a BES patented sniffing technique that incorporates Forward Error Correction (FEC) for enhanced RF performance in TWS systems.



System Block Diagram

1.1 Applications

- AI Bluetooth TWS / OWS / clip-on earbuds / headsets / smart glasses
- Other portable audio devices

1.2 Features & Specifications*

CPU Subsystem	Tri-core Arm Cortex-M55
	Tensilica HiFi 5s DSP (optional)
	Ethos-U55 NPU (optional)
Memory and Storage	Shared 8.3 MB SRAM
	Flash in package
	boot ROM
Bluetooth Subsystem	Dual-mode BT 6.1 with Channel Sounding
Audio & Voice Features	2x DACs
	3x ADCs
Peripheral Interfaces	GPADC/I2S/TDM/SPI/I2C/UART/PWM/DMIC/SPDIF/USB/LED/Cap sensor/GPIO……
Package	220-pin BGA

* The content in the table is subject to change without notice.