



BES2810AP

Brief Datasheet

Ultra-low Power AI Bluetooth Audio Platform

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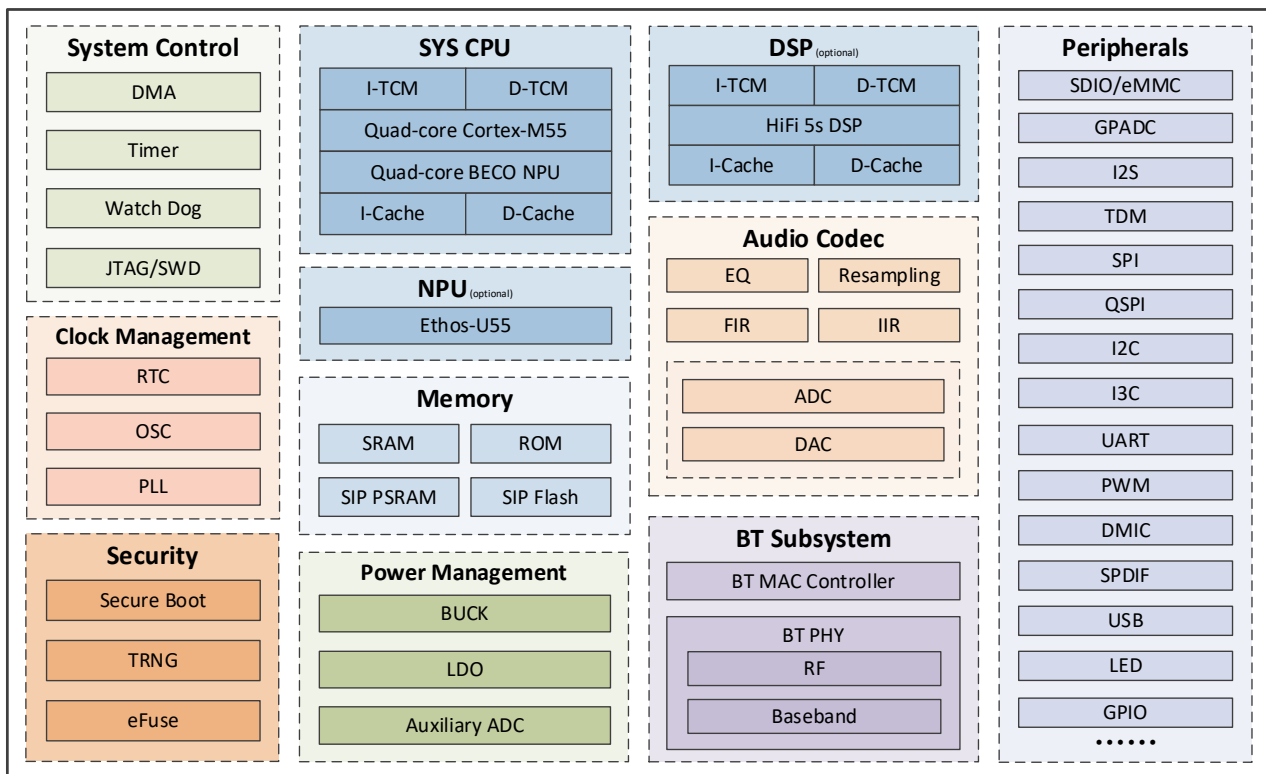
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1 General Description

The BES2810AP is an ultra-low power, high performance, smart Bluetooth audio SoC. The platform incorporates a powerful CPU subsystem comprising a quad-core Arm Cortex-M55 processor with a quad-core BES proprietary coprocessor (BECO) for advance signal processing and NN workloads, a Tensilica HiFi 5s DSP (optional), and an Ethos-U55 NPU (optional). This combination significantly reduces power consumption while providing substantial application processing capabilities.

The platform incorporates a dual-mode Bluetooth 6.1 subsystem for both Bluetooth classic and LE audio, an audio codec subsystem, and a Power Management Unit (PMU).



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	Quad-core Arm Cortex-M55
	Tensilica HiFi 5s DSP (optional)
	Ethos-U55 NPU (optional)
Memory and Storage	Shared 8.3 MB SRAM
	Flash and PSRAM in package
	boot ROM
Bluetooth Subsystem	Dual-mode BT 6.1 with Channel Sounding
Audio & Voice Features	2x DACs
Peripheral Interfaces	SDIO/eMMC/GPADC/I2S/TDM/SPI/QSPI/I2C/I3C/UART/PWM/DMIC/SPDIF/USB/LED/GPIO.....
Package	220-pin BGA

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