Brief Datasheet

Ultra-low Power Bluetooth/Wi-Fi Smart Wearable Platform

CONTACT US

Company: *Bestechnic (Shanghai) Co., Ltd. ("**BES**")*

Address: *2F, Building B, Lane 2889 Jinke Road, Pudong, Shanghai (201203)*

Phone: *(86)21 6877 1788*

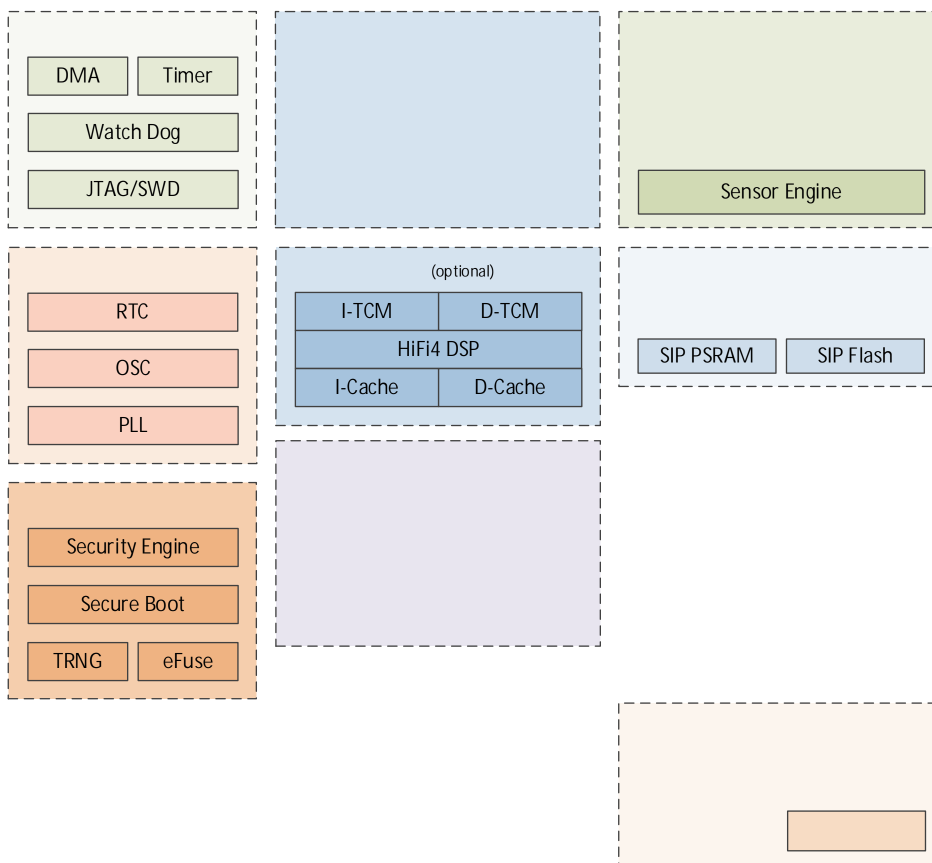
For product inquiries and more information, please visit www.bestechnic.com*.*

DISCLAIMER:

No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, for any purpose, without the express written permission of BES. BES retains the right to make changes to this document at any time, without notice. BES makes no warranty of any kind, expressed or implied, with regard to any information contained in this document, including, but not limited to, the implied warranties of merchant ability or fitness for any particular purpose. Further, BES does not warrant the accuracy or completeness of the information, text, graphics, or other items contained within this document.

The BES2800BP is an ultra-low power, high performance, smart wearable SoC with integrated Bluetooth and Wi-Fi (optional). The platform incorporates a powerful CPU subsystem comprising a dual-core Arm Cortex-M55 processor with a dual-core BECO NPU, a BES proprietary coprocessor for advance signal processing and NN workloads, a Tensilica HiFi 4 DSP (optional), an audio codec subsystem, and a host subsystem comprising a dual-core STAR-MC1 processor with a dual-core BECO NPU. This combination significantly reduces power consumption while providing substantial application processing capabilities.

The platform incorporates a dual-mode Bluetooth 5.4 subsystem for both Bluetooth classic and LE audio, as well as a Wi-Fi 6 subsystem for high-throughput wireless connectivity. Furthermore, it integrates a multimedia subsystem that includes a 2.5D GPU for advanced graphics capabilities, an LCD controller with up to 3-layer alpha blending, and a 4-lane or dual 2-lane MIPI DSI with up to 720p 24bpp resolution.



*

CPU Subsystem	Dual-core ARM Cortex-M55
	Tensilica HiFi 4 DSP (optional)
Host Subsystem	Dual-core STAR-MC1
	Sensor engine
Memory and Storage	Shared 8.3 MB SRAM
	Flash and PSRAM in package
	boot ROM
Bluetooth Subsystem	Dual-mode BT 5.4 with LE audio
Wi-Fi Subsystem	Dual-Band 2.4G & 5G Wi-Fi IEEE 802.11 a/b/g/n/ax (optional)
Graphics & Multimedia	2.5D Vector GPU
	MIPI DSI
Audio & Voice Features	1x DAC
	3x ADCs
Peripheral Interfaces	eMMC/SDIO/GPADC/SPI/QSPI/I2C/UART/I2S/TDM/DMIC/PWM/SPDIF/SCI/USB/GPIO......
Package	363-pin BGA

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