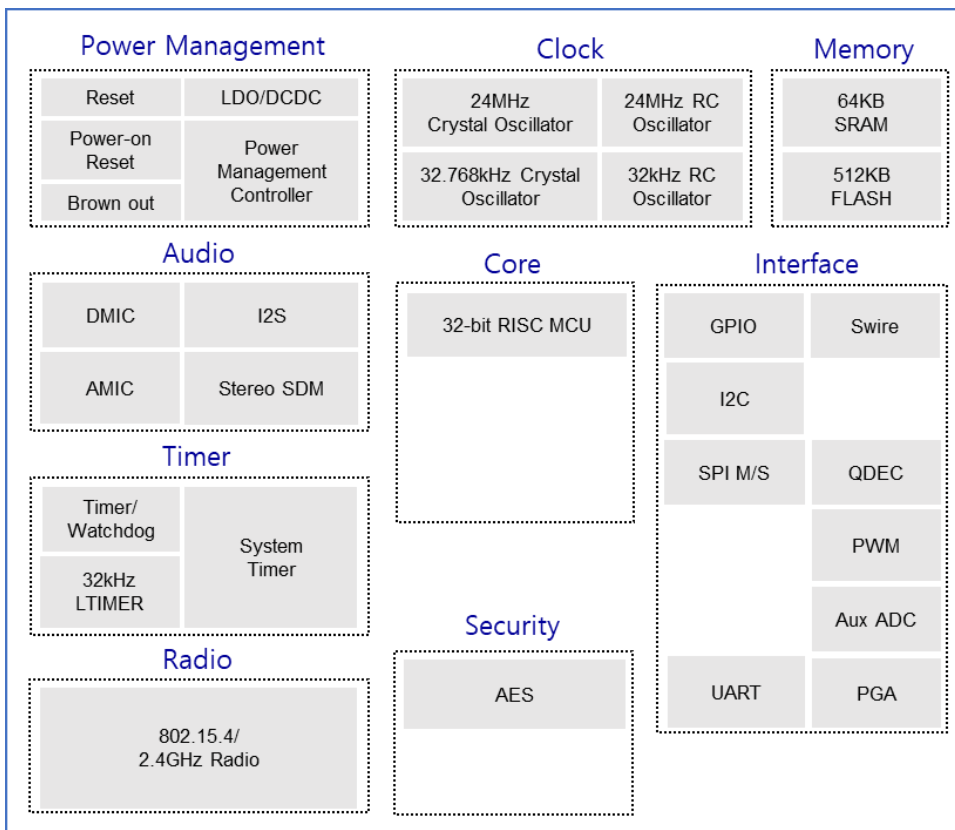


Overview

The TLSR8656 is Zigbee/RF4CE SoC solution with internal Flash and audio support. The TLSR8656 combines the radio frequency (RF), digital processing, protocols stack software and profiles for Zigbee and RF4CE standard into a single SoC. The TLSR8656 supports IEEE 802.15.4 standard and Zigbee-compliant platform.



Applications

- Smart Lighting, Smart Home devices
- Smart Grid
- Building automation
- Intelligent logistics/ Transportation/city
- Health care
- Industrial control

Key Features

32-bit RISC MCU

- Max.48MHz operating frequency
- Better power-balanced performance than ARM M0

Protocols

- IEEE 802.15.4: Zigbee/RF4CE
- 2.4GHz proprietary
- HW OTA upgrade and multiple boot switch

Memory

- 64KB SRAM w/ max. 32KB retention
- Program memory: 512KB Flash

Power Consumption (@3.3V DCDC)

- Rx 5.3mA, Tx 4.8mA @ 0 dBm
- Deep sleep: 0.4uA

RF Specification

- Rx sensitivity (dBm): -99.5@IEEE802.15.4 250kbps
- Tx output power (max.): +10dBm@BLE,

Security

- HW AES and AES-CCM
- HW accelerator for Elliptical curve cryptography (ECC)

Interface

- Max.17 GPIOs
- Configurable 5-wire JTAG debug interface
- DMIC
- AMIC
- I2S
- Stereo audio output
- SPI, I2C, Swire, UART with hardware flow control support
- Max.6 channels of differential PWM
- IR transmitter with DMA
- 6-channel 14-bit auxiliary ADC
- One quadrature decoder
- Temperature sensor
- Low power comparator

Supply Voltage

- 1.8V ~ 3.6V

Operating Temperature

- -40°C ~ +85°C

Package

- TLSR8656, QFN32, 5x5mm