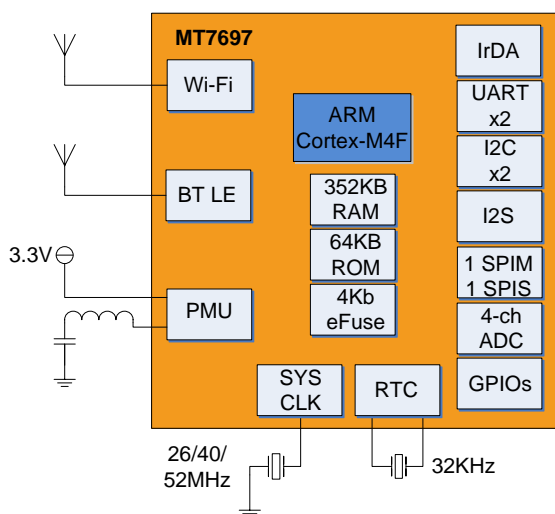## PRODUCT OVERVIEW

MT7697 is highly integrated single chip which features an application processor, a low power 1x1 11n single-band Wi-Fi subsystem, a Bluetooth subsystem, and a Power Management Unit.

The application processor subsystem contains ARM Cortex-M4 with floating point MCU. It also includes many peripherals, including UART, I2C, SPI, I2S, PWM, IrDA, and auxiliary ADC. It also includes embedded SRAM/ROM.

The Wi-Fi subsystem contains the 802.11b/g/n radio, baseband, and MAC that are designed to meet both the low power and high throughput application. It also contains a network processor that could offload the application processor.

The Bluetooth subsystem contains the Bluetooth radio, baseband, link controller. It also uses a processor for the Bluetooth protocols.

BENEFITS

- Integrate 4Kbit eFuse to store device specific information and RF calibration data.
- Advanced Wi-Fi/Bluetooth coexistence scheme
- High integration with RF+MCU+Memory
- Low power mode with RTC

APPLICATIONS

- Home Appliances
- Home Automation
- Smart Gadget
- IoT Bridge
- Cloud Connectivity

FEATURES

Platform

- ARM Cortex-M4 MCU with FPU
- Embedded 352KB SRAM and 64KB boot ROM
- Supports external serial flash with Quad Peripheral Interface (QPI) mode
- Supports eXecute In Place (XIP) on flash
- 32KB cache in XIP mode
- 25 DMA channels
- Low power RTC mode with 32KHz crystal support

Secure Boot & Crypto Engine

- Secure Boot from serial flash
- Hardware crypto engines including AES, DES/3DES, SHA2 for network security

Connectivity

- SPI, UART, I2C, I2S, PWM, ADC, IrDA, GPIO

WLAN

- IEEE 802.11 b/g/n compliant
- Dedicated high-performance 32-bit RISC CPU
- Supports 20MHz, 40MHz bandwidth in 2.4GHz band
- Single-band 1T1R mode with data rate up to 150Mbps
- Supports STBC, LDPC
- Greenfield, mixed mode, legacy modes support
- IEEE 802.11e support
- Security support for WFA WPA/WPA2 personal, WPS2.0
- Supports 802.11w protected managed frames
- QoS support of WFA WMM
- Integrated LNA, PA, and T/R switch
- Optional external LNA and PA support.
- RX diversity support with additional RX input

Bluetooth

- Bluetooth 4.2 Low Energy (LE)
- Integrated BALUN and PA
- Supports SCO and eSCO link with re-transmission
- Channel assessment for AFH

Technology and Package

- 8mm x 8mm 68-pin QFN package