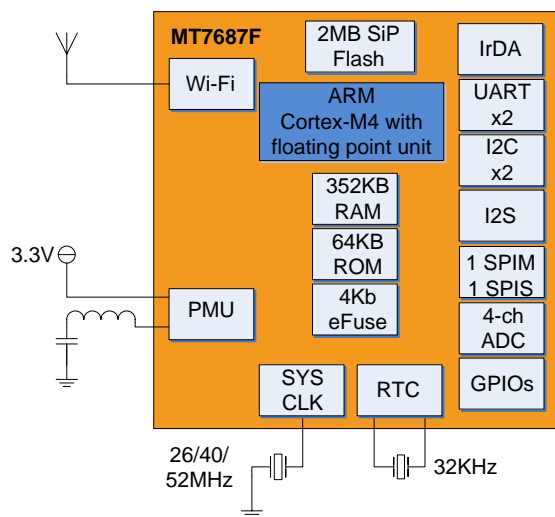


PRODUCT OVERVIEW

MT7687F is highly integrated single chip which features an application processor, a low power 1x1 11n single-band Wi-Fi 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 and a serial Flash in the package .

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.



BENEFITS

- Integrate 4kbit eFuse to store device specific information and RF calibration data.
- High integration with RF, MCU and Memory.
- Low power mode with RTC.

APPLICATIONS

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

FEATURES

Platform

- ARM Cortex-M4 MCU with floating point unit (FPU).

- Embedded 352kB SRAM and 64kB boot ROM.
- 2MB Quad Peripheral Interface (QPI) mode SiP serial Flash. Can also support external serial flash up to 16MB.
- Supports eExecute 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 and 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 mode 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.

Technology and Package

- 8mm x 8mm 68-pin QFN package with SiP serial Flash of 2MB