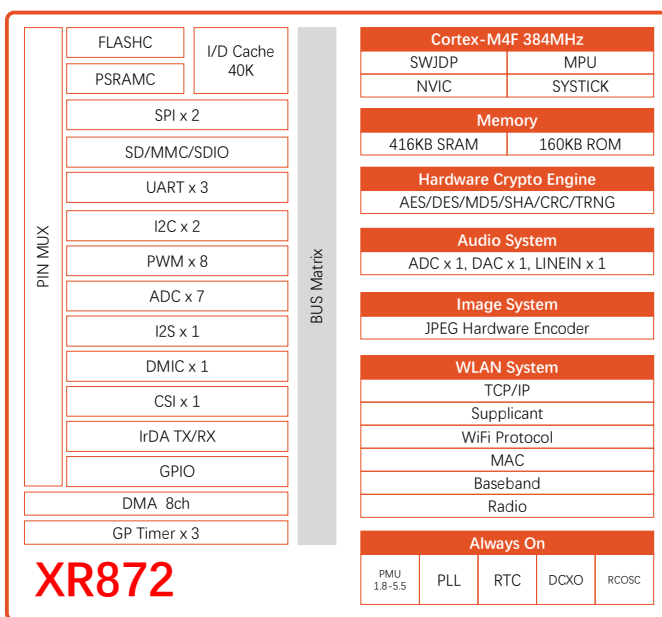




High Performance Wireless MCU

for Artificial Intelligence and Internet of Things Applications

The XR872 is a highly integrated single processor which features an ARM Cortex-M4F MCU, a low power 802.11b/g/n WLAN subsystem, an audio codec with an ADC and a DAC, an image encoder and a Power Management Unit (PMU). It is designed for abundant of smart devices in product categories such as Internet of Things (IoT), lightweight artificial intelligence devices.



Highlight

- High performance and highly integrated MCU, which enables software to perform more complex tasks like speech recognition.
- Various peripherals support allows customers to develop a wide variety of different products.
- A high level of integration effectively reduces the BOM cost and provides a faster time-to-market for new products.
- Industry leading power consumption and effective power management ensure excellent battery life.
- Hardware crypto engine makes data transmission more secure and faster.

Feature

Platform

- ARM Cortex M4F, up to 384MHz
- 416KB SRAM and 160KB Code ROM
- Integrates 4MB PSRAM in XR872AT
- Supports external Flash with QPI and eExecute In Place(XIP) mode
- 8 shared universal DMA channels
- 1024 bits eFuse

Crypto Engine

- AES ECB/CBC/CTR, 128/192/256-bit key
- DES/3DES
- MD5/SHA/SHA256, CRC16/32, TRNG

Audio System

- 24bit mono ADC with 8K ~ 48KHz sample rate
- 24bit mono DAC with 8K ~48KHz sample rate
- One differential linein P/N input for speaker AEC signal capture
- Analog low-power loop from microphone input to lineout output

Image System

- Supports JPEG base line encoder
- Supports picture resolution from 128 x 128 to 1920 x 1088
- Supports 640 x 480@30fps or 1280 x 720@15fps

WLAN System

- Compatible with 802.11b/g/n standard
- Single-band 2.4G 1T1R WLAN
- WPA/WPA2 personal, WPS2.0
- Integrated LNA, PA and T/R switch
- STA, AP and STA/AP

Others

- Supports Secure Boot
- 1.8V ~ 5.5V single input power supply
- 200mA 3.3V LDO for external devices
- XR872AT 6mm x 6 mm, 52-pin QFN
- XR872ET 5mm x 5 mm, 40-pin QFN