

# Ambiq Micro: Ultra-Low Power MCUs

## The World's Most Energy-Efficient Solutions

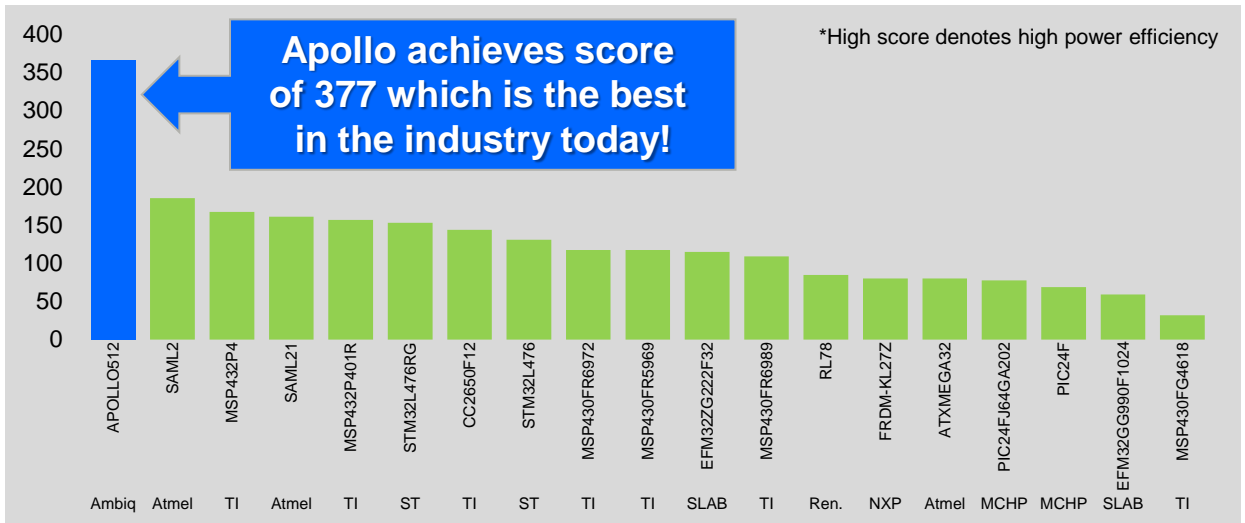
### 'Apollo Family'



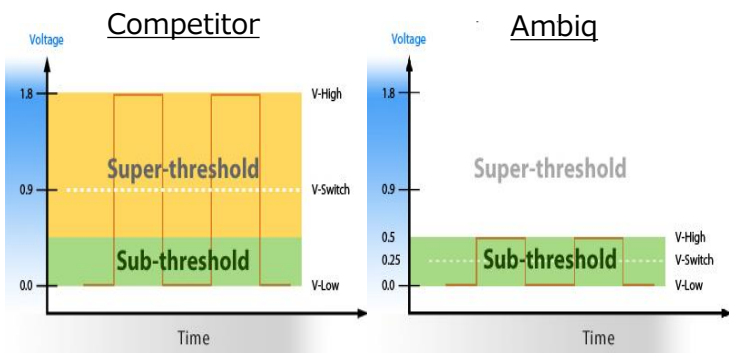
ARM® Cortex®-M4F, Flash 512KB, RAM 64KB  
Active mode 35uA/MHz, Standby mode 143nA



### EEMBC ULPBench™\*

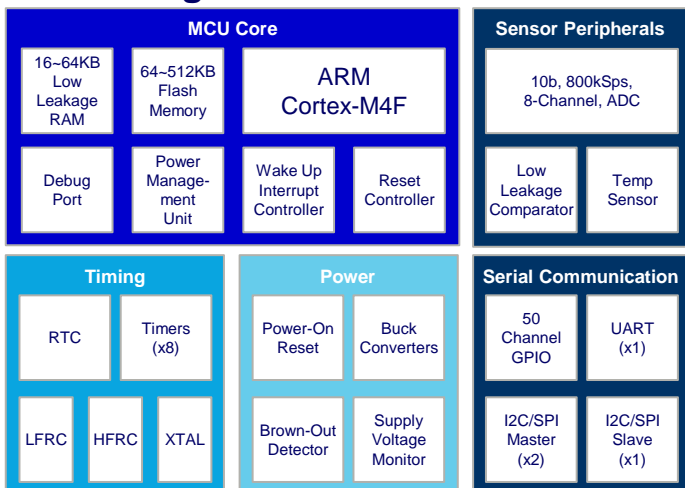


### SPOT™: Breakthrough technology for Ultra-Low Power



Patented SPOT (Subthreshold Power Optimized Technology) Platform dramatically reduces an internal operating voltage to 0.5V. It enables Apollo to achieve its best-in-class power consumption in both active-mode and standby mode. Apollo achieves score of 377 and smashes through EEMBC ULPBench ceiling, doubling the highest score on record.

### Block Diagram

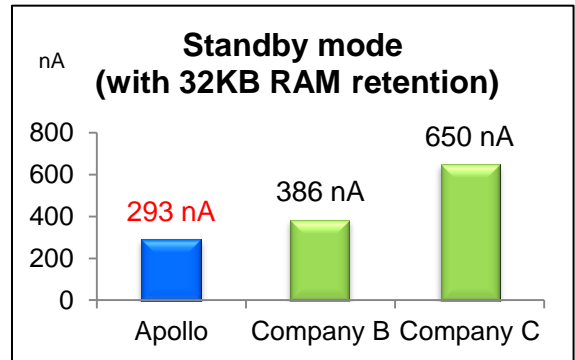
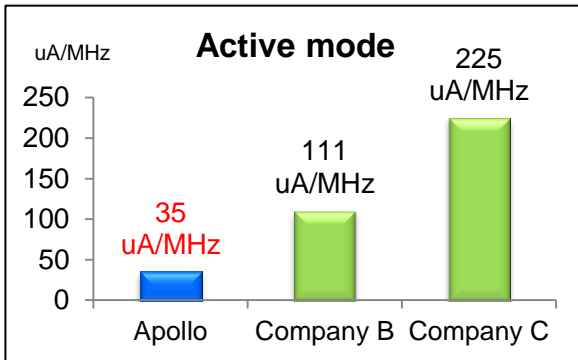


### Target Application



- Wearables
- Smart watches
- Activity trackers
- IoT devices
- Wireless sensors
- Sensing module
- Meter (Gas · Electric)
- Energy harvesting
- And more

## Competitive Comparison: ARM Cortex-M4F



## Memory/Package lineup

Part Number	Flash	RAM	Package	package size
APOLLO512-KCR	512KB	64KB	41-pin WLCSP	2.49 x 2.90 mm
APOLLO512-KBR	512KB	64KB	64-pin BGA	4.50 x 4.50 mm
APOLLO256-KCR	256KB	32KB	41-pin WLCSP	2.49 x 2.90 mm
APOLLO256-KBR	256KB	32KB	64-pin BGA	4.50 x 4.50 mm
APOLLO128-KCR	128KB	32KB	41-pin WLCSP	2.49 x 2.90 mm
APOLLO128-KBR	128KB	32KB	64-pin BGA	4.50 x 4.50 mm
APOLLO064-KCR	64KB	16KB	41-pin WLCSP	2.49 x 2.90 mm
APOLLO064-KBR	64KB	16KB	64-pin BGA	4.50 x 4.50 mm

## Apollo-EVK

Evaluation system 'Apollo-EVK' consists of 3 boards: Base board, sensor board and BTLE board.



<Contact Information>

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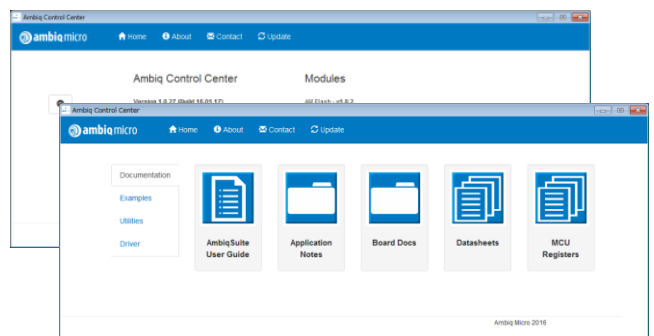
E-mail: fei-ambiq-g-support@dl.jp.fujitsu.com

## Development environment: Ambiq Control Center

Sample project/program, Application note, software and more information are available on Ambiq Control Center.

Please visit and download 'Ambiq Control Center' from the web-site.

<http://www.ambiqmicro.com/support>



## 3<sup>rd</sup> party debug tools

IAR, KEIL