AMBIQ MICRO APOLLO2 SERIES ARM CORTEX M4 MICROCONTROLLER

SK-AMAP2-BREAKOUT-V11







Introduction

The SK-AMAP2-BREAKOUT-V11 evaluation board includes an Ambiq Micro Apollo 2 MCU with all pins available at 54 pins.

1.1 Features

- Ambiq Micro Apollo 2:
 - Ultra-low supply current:
 - <10 μ A/MHz executing from flash at 3.3 V
 - <10 µA/MHz executing from RAM at 3.3 V</p>
 - High-performance ARM Cortex-M4F Processor:
 - Up to 48 MHz clock frequency
 - Floating point unit
 - Memory protection unit
 - Wake-up interrupt controller with 32 interrupts
 - Ultra-low power memory:
 - Up to 1 MB of flash memory for code/data
 - Up to 256 KB of low leakage RAM for code/data
 - 16kB 2-way Associative Cache
 - Ultra-low power interface for off-chip sensors:
 - 14 bit, 15-channel, up to 1.2 MS/s ADC
 - Temperature sensor with +/-3°C accuracy
 - Voltage Comparator
 - Flexible serial peripherals:
 - 6x I2C/SPI master for communication with sensors, radios, and other peripherals
 - 1x I2C/SPI slave for host communications
 - 2x UART for communication with peripherals and legacy devices
 - PDM for mono and stereo audio microphones
 - Rich set of clock sources:
 - 32.768 kHz XTAL oscillator
 - Low frequency RC oscillator 1.024 kHz
 - High frequency RC oscillator 48 MHz
 - RTC based on Ambiq's AM08X5/18X5 families
 - Compact package options:
 - 2.5 x 2.5 mm (0.35mm) 49-pin CSP with 34 GPIO
 - 4.5 x 4.5 mm (0.5mm) 64-pin BGA with 50 GPIO
- Parts assembled:
 - o MCU
 - Passives
 - Crystal
 - DC/DC converter coils
 - Reset button
 - SWD Debug header
 - o 2x 27 pin headers 2.54mm
 - 1x 10 pin communication header

1.2 Dimensions

- Width: 22mm
- Height: 70mm

1.3 Scope of delivery

- Apollo 2 breakout board SK-AMAP2-BREAKOUT-V11 in ESD bag