

ARM MCU, SAM32 Family SAM D2X Series Microcontrollers, ARM Cortex-M0+, 32bit, 48 MHz, 256 KB, 32 KB

Manufacturers	<a href="#">Microchip Technology, Inc</a>
Package/Case	VQFN-32
Product Type	Embedded Processors & Controllers
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ATSAMD20E18A-MU or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

## General Description

A low-power, high-performance Microchip's ARM® Cortex®-M0+ based flash microcontroller, the ATSAMD20E17 is ideal for a wide range of home automation, consumer, metering, and industrial applications. It features:

256KB of flash and 32KB of SRAM

Up to 48MHz operating frequency

Four serial communication modules (SERCOM) configurable as UART/USART, SPI or I2C, six 16-bit timer/counters, 32-bit Real Time clock and calendar, 10 PWM channels, one 10-channel 12-bit ADC, one 10-bit DAC

Support for up to 60 touch channels

1.62V to 3.63V power supply

Easy pin migration to SAMD20G and SAMD20J devices

Supported by Atmel Studio, ASF and the SAM D20 Xplained Pro kit

Supported by MPLAB X IDE and MPLAB Harmony.

## Features

Processor

ARM Cortex-M0+ CPU running at up to 48MHz

Single-cycle hardware multiplier

Memories

256KB in-system self-programmable Flash

32KB SRAM memory

System

Power-on reset (POR) and brown-out detection (BOD)

Internal and external clock options with 48MHz digital frequency locked loop (DFLL48M) and 48MHz to 96MHz

fractional digital phase locked loop (FDPLL96M)

External interrupt controller (EIC)

16 external interrupts

One non-maskable interrupt

Two-pin serial wire debug (SWD) programming, test and debugging interface

Low power

Idle and standby sleep modes

SleepWalking peripherals

Peripherals

8-channel event system

Five 16-bit timer/counters (TC), configurable as either:

One 16-bit TC with compare/capture channels

One 8-bit TC with compare/capture channels

One 32-bit TC with compare/capture channels, by using two TCs

32-bit real time counter (RTC) with clock/calendar function

Watchdog timer (WDT)

CRC-32 generator

Up to six serial communication interfaces (SERCOM), each configurable to operate as either:

USART with full-duplex and single-wire half-duplex configuration

I2C up to 40kHz

SPI

One 12-bit, 350ksps analog-to-digital converter (ADC) with 10 channels

Differential and single-ended input

1/2x to 16x programmable gain stage

Automatic offset and gain error compensation

Oversampling and decimation in hardware to support 13-, 14-, 15- or 16-bit resolution

10-bit, 350ksps digital-to-analog converter (DAC)

Two analog comparators (AC) with window compare function

Peripheral Touch Controller (PTC)

256-channel capacitive touch and proximity sensing

I/O

26 GPIO pins

Packages

32-pin TQFP, QFN

Operating voltage

1.62V to 3.63V

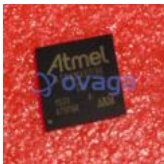
Power Consumption

Down to 70µA/MHz in active mode

Down to 8µA running the peripheral Touch Controller

Temperature range

## Related Products



### [ATSAMA5D36A-CU](#)

Microchip Technology, Inc  
LFBGA-324



### [ATMEGA32M1-AU](#)

Microchip Technology, Inc  
TQFP-32



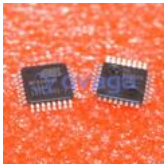
### [ATXMEGA128D3-AU](#)

Microchip Technology, Inc  
TQFP-64



### [ATTINY2313V-10SU](#)

Microchip Technology, Inc  
SOIC-20



[ATMEGA64M1-15AZ](#)

Microchip Technology, Inc  
TQFP-32



[ATMEGA16L-8PU](#)

Microchip Technology, Inc  
PDIP-40



[ATTINY48-MU](#)

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VQFN-32



[ATTINY4-TSHR](#)

Microchip Technology, Inc  
SOT-23-6