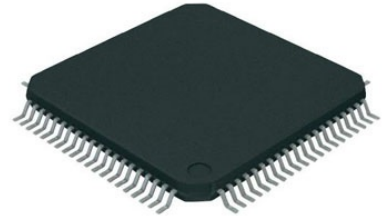


IC MCU 32BIT 128KB FLASH 48TQFP

Manufacturers	Microchip Technology, Inc
Package/Case	48-TQFP
Product Type	Embedded Processors & Controllers
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ATSAMD21G17D-AUT 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 ARM® Cortex®-M0+ based Flash microcontroller (MCU) optimized for control applications, the Microchip'sATSAMD21E15L is ideal for a wide range of lighting, motor control and industrial applications. It features:

128KB of Flash and 16KB of SRAM

4KB RWW support

Up to 48MHz operating frequency

Five serial communication (SERCOM) modules configurable as UART/USART, SPI or I2C, six 16-bit timer/counters, two 24-bit timer/counters, 32-bit Real-Time Clock and calendar, one 18-channel 12-bit ADC, one 10-bit DAC and four analog comparators

1.62V to 3.63V power supply

48-pin package with up to 38 GPIO pins

Supported by Atmel Studio, ASF and the STK600 development platform

Supported by MPLAB X IDE and MPLAB Harmony.

Features

Processor

ARM CortexM0+ CPU running at up to 48MHz

Single-cycle hardware multiplier

Micro Trace Buffer (MTB)

Memories

128KB in-system self-programmable Flash

4KB RWW support

16KB SRAM Memory

System

Power-on reset (POR) and brownout 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

12channel Direct Memory Access Controller (DMAC)

12channel Event System

Five 16bit Timer/Counters (TC), configurable as either:

One 16bit TC with two compare/capture channels

One 8bit TC with two compare/capture channels

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

Four 24bit Timer/Counters for Control (TCC), with extended functions:

Up to four compare channels with optional complementary output

Generation of synchronized pulse width modulation (PWM) pattern across port pins

Deterministic fault protection, fast decay and configurable dead-time between complementary output

Dithering that increase resolution with up to 5 bit and reduce quantization error

32bit Real Time Counter (RTC) with clock/calendar function

Watchdog Timer (WDT)

CRC32 generator

Six Serial Communication Interfaces (SERCOM), each configurable to operate as either:

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

I2C up to 3.4MHz

SPI

LIN slave

One 12bit, 350ksps Analog-to-Digital Converter (ADC) with up to 18 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 16bit resolution

10-bit, 350ksps Digital-to-Analog Converter (DAC)

Four Analog Comparators (AC) with window compare function

I/O

38 GPIO pins

Packages

48pin TQFP, QFN

Operating Voltage

1.62V 3.63V

Related Products



[ATSAMA5D36A-CU](#)

Microchip Technology, Inc
LFBGA-324



[ATMEGA32M1-AU](#)

Microchip Technology, Inc
TQFP-32



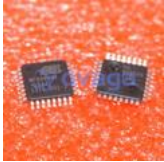
[ATXMEGA128D3-AU](#)

Microchip Technology, Inc
TQFP-64



[ATTINY2313V-10SU](#)

Microchip Technology, Inc
SOIC-20



[ATMEGA64M1-15AZ](#)

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TQFP-32



[ATMEGA16L-8PU](#)

Microchip Technology, Inc
PDIP-40



[ATTINY48-MU](#)

Microchip Technology, Inc
VQFN-32



[ATTINY4-TSHR](#)

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SOT-23-6