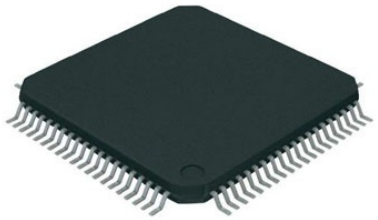
ATSAMC21J18A-AUT

Data Sheet

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

Manufacturers	Microchip Technology, Inc
Package/Case	TQFP-64
Product Type	Embedded Processors & Controllers
RoHS	
Lifecycle	



Images are for reference only

Please submit RFQ for ATSAMC21J18A-AUT or Email to us: sales@ovaga.com We will contact you in 12 hours. RFQ

General Description

The Microchip SAM C series of 5V Cortex M0+devices is designed for industrial and commercial applications in noisyenvironments. These products feature robust communications peripheralsincluding the SERCOM module and CAN-FD, along with advanced motor controlperipherals, and the Peripheral Touch Control (PTC) for developing robust userinterfaces.

Supported by MPLAB X IDE and MPLAB Harmony.

Features

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

Single-cycle hardware multiplier

Micro Trace Buffer

Memory Protection Unit (MPU)

256KB in-system self-programmable Flash

8KB independent self-programmable Flash for EEPROM emulation

32KB SRAM Main Memory

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

Internal and external clock options with 48MHz to 96MHz

Fractional Digital Phase Locked Loop (FDPLL96M)

16 external interrupts

One non-maskable interrupt

Two-pin Serial Wire Debug (SWD) programming, test and debugging interface

Idle, standby, and off sleep modes

SleepWalking peripherals

Hardware Divide and Square Root Accelerator (DIVAS)

12-channel Direct Memory Access Controller (DMAC)

12-channel Event System

Up to eight 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

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 outputs

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

Frequency Meter

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

Watchdog Timer (WDT)

CRC-32 generator

CAN 2.0A/B

ISO CAN FD; ISO 1189801:2015

Each CAN interface have two selectable pin locations to switch between two external CAN transceivers (without the need for an external switch)

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

I2C up to 3.4MHz (Except SERCOM6 and SERCOM7)

SPI

LIN master/slave

RS-485

PMBus

Four Configurable Custom Logic (CCL)

Differential and single-ended input

Automatic offset and gain error compensation

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

One 16-bit Sigma-Delta Analog-to-Digital Converter (SDADC) with up to 3 differential channels

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

Four Analog Comparators (AC) with window compare function

Integrated Temperature Sensor

Peripheral Touch Controller (PTC)

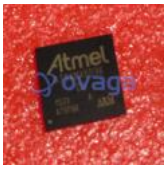
256-Channel capacitive touch and proximity sensing I/O

Up to 52 programmable I/O pins

Drop in compatible with select SAM D20 and SAM D21

2.7V – 5.5V

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

Microchip Technology, Inc

VQFN-32

ATTINY4-TSHR

Microchip Technology, Inc

SOT-23-6