ARM MCU, SAM32 Family AT91SAM7S Series Microcontrollers, ARM7TDMI, 32bit, 55 MHz, 64 KB, 16 KB

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

Images are for reference only

Please submit RFQ for AT91SAM7S64C-AU or Email to us: sales@ovaga.com We will contact you in 12 hours.   RFQ

General Description

Microchip'sARM®-based SAM7S64 is a member of the SAM7S series of flash microcontrollers based on the 32-bit ARM7TDMI RISC processor.

It operates at a maximum speed of 55MHz and features 32KB of flash memory and 16KB of SRAM.

The peripheral set includes a Full Speed USB device and PHY at 12Mbps, UART, two USARTs, TWI I2C), SPI, SSC, two PWM timers, three 16-bit timers, RTT, 8x10-bit ADC and 32 IO lines.

It achieves single-cycle instruction access from embedded flash at 27 MIPS.

The multi-layer bus matrix, multiple SRAM banks, PDC, and DMA support parallel tasks and maximize data throughput.

The SAM7S64 operates from 1.65V to 3.6V and is available in 64-pin LQFP and QFN packages.

Features

Core

ARM7TDMI® ARM® Thumb® Processor 32-bit RISC Architecture

High-density 16-bit Instruction Set

EmbeddedICE™ In-circuit Emulation, Debug Communication Channel Support

Memories

64 Kbytes, Organized in 512 Pages of 128 Bytes (Single Plane)

16 Kbytes embedded SRAM, Single-cycle Access at Maximum Speed

Memory Controller (MC)

Memory Protection Unit

System

Embedded 1.8V Regulator, Drawing up to 100 mA for the Core and External Components

Based on Power-on Reset Cells and Low-power Factory-calibrated Brownout Detector

Low-power RC Oscillator, 3 to 20 MHz On-chip Oscillator and One PLL

Power Management Controller (PMC)

Advanced Interrupt Controller (AIC)

Two-wire UART and Support for Debug Communication Channel interrupt, Programmable ICE Access Prevention

20-bit Programmable Counter plus 12-bit Interval Counter

Windowed Watchdog (WDT)

Real-time Timer (RTT)

32 Parallel Input/Output Controllers (PIO)

Eleven Peripheral DMA Controller (PDC) Channels

Four High-current Drive I/O lines, Up to 16 mA Each

Package

64-lead LQFP

64-pad QFN

Peripheral Features

One Synchronous Serial Controller (SSC)

Two Universal Synchronous/Asynchronous Receiver Transmitters (USART)

One Master/Slave Serial Peripheral Interfaces (SPI)

One USB 2.0 Full Speed (12 Mbits per second) Device Port

One Three-channel 16-bit Timer/Counter (TC)

One Four-channel 16-bit PWM Controller (PWMC)

One Two-wire Interface (TWI)

Analog Features

One 8-channel 10-bit Analog-to-Digital Converter, Four Channels Multiplexed with Digital I/Os

Fully Static Operation

Up to 55 MHz at 1.8V and 85·C Worst Case Conditions

Up to 48 MHz at 1.65V and 85·C Worst Case Conditions
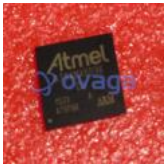
Debugger Development Support

SAM-BA - Interface with SAM-BA Graphic User Interface

IEEE® 1149.1 JTAG Boundary Scan on All Digital Pins

Related Products

ATSAMA5D36A-CU

Microchip Technology, Inc

LFBGA-324
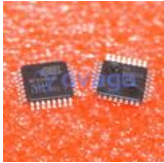
ATMEGA32M1-AU

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

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