

SAM3U Series: 96 MHz Cortex M3 Flash MCU with High-Speed USB

Atmel's SAM3U series is the world's first 32-bit ARM Cortex M3 Flash microcontroller with high-speed 480 Mbps USB + Phy.

High-Speed USB

The SAM3U is the first Cortex M3 microcontroller with high-speed USB and an integrated transceiver for fast up/downloading of data, robust EMI tolerance, and plug-and-play high-speed serial interconnectivity.

High Performance

Features a 96 MHz maximum operating frequency and a high data-bandwidth architecture based on a 5-layer bus matrix with 22 DMA channels and distributed memory

Dual-Bank Flash

Provides safe in-application programming (IAP) including the boot program

1.62 to 3.6V Operation

True 1.8V±10% operation extends device operation when running from two AA alkaline batteries

Memory Protection Unit

Improves code protection and secures multi-application/task execution

High-End Analog

Features a differential input and programmable gain amplifier (PGA) on a 12-bit 1 Msps ADC

SAM3U-EK & Support Ecosystem

For rapid evaluation and code development. Industry-leading third parties provide a full range of dev tools, RTOS, middleware and support services to reduce time-to-market to a minimum.



Cortex
Intelligent Processors by ARM
brought to you by Atmel

| Device | Flash (Kbytes) | SRAM (Kbytes) | PIOs | MMC Data Bus (bits) | USARTs | SPI | TWI | FWUP, SHDN Pins | External Bus Interface | ADC | Package |
|---------|----------------|---------------|------|---------------------|--------|-----|-----|-----------------|--|----------------------------|-------------------|
| SAM3U4E | 2 x 128 | 52 | 96 | 8 | 4 | 5 | 2 | Yes | 8 or 16 bits, 4 chip selects, 24-bit address | 8-ch 12-bit 8-ch 10-bit | LQFP144 BGA144 |
| SAM3U2E | 128 | 36 | 96 | 8 | 4 | 5 | 2 | Yes | 8 or 16 bits, 4 chip selects, 24-bit address | 8-ch 12-bit 8-ch 10-bit | LQFP144 BGA144 |
| SAM3U1E | 64 | 20 | 96 | 8 | 4 | 5 | 2 | Yes | 8 or 16 bits, 4 chip selects, 24-bit address | 8-ch 12-bit 8-ch 10-bit | LQFP144 BGA144 |
| SAM3U4C | 2 x 128 | 52 | 57 | 4 | 3 | 4 | 1 | No | 8 bits, 2 chip selects, 8-bit address | 4-ch 12-bit 4-ch 10-bit | LQFP100 BGA100 |
| SAM3U2C | 128 | 36 | 57 | 4 | 3 | 4 | 1 | No | 8 bits, 2 chip selects, 8-bit address | 4-ch 12-bit 4-ch 10-bit | LQFP100 BGA100 |
| SAM3U1C | 64 | 20 | 57 | 4 | 3 | 4 | 1 | No | 8 bits, 2 chip selects, 8-bit address | 4-ch 12-bit 4-ch 10-bit | LQFP100 BGA100 |