
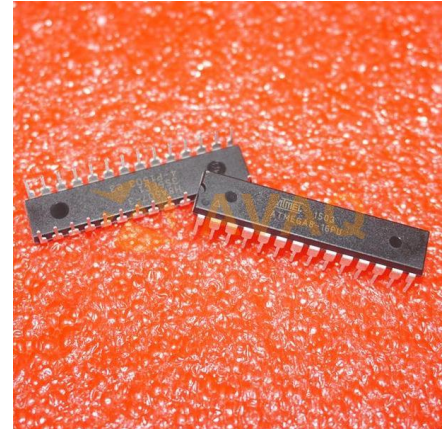


## MCU 8-bit AVR RISC 8KB Flash 5V 28-Pin PDIP W Tube

<b>Manufacturer:</b>	<a href="#">Microchip Technology, Inc</a>
<b>Package/Case:</b>	DIP
<b>Product Type:</b>	Embedded Processors & Controllers
<b>RoHS:</b>	RoHS Compliant/Lead free 
<b>Lifecycle:</b>	Active



Images are for reference only

[Inquiry](#)

### General Description

The Atmel AVR ATMEGA8 is a low-power CMOS 8-bit microcontroller based on the AVR RISC architecture. By executing powerful instructions in a single clock cycle, the ATMEGA8 achieves through puts approaching 1MIPS per MHz, allowing the system designer to optimize power consumption versus processing speed.

The Atmel®AVR® core combines a rich instruction set with 32 general purpose working registers. All the 32 registers are directly connected to the Arithmetic Logic Unit (ALU), allowing two independent registers to be accessed in one single instruction executed in one clock cycle. The resulting architecture is more code efficient while achieving throughputs up to ten times faster than conventional CISC microcontrollers.

The ATMEGA8 provides the following features: 8 Kbytes of In-System Programmable Flash with Read-While-Write capabilities, 512 bytes of EEPROM, 1 Kbyte of SRAM, 23 general purpose I/O lines, 32 general purpose working registers, three flexible Timer/Counters with compare modes, internal and external interrupts, a serial programmable USART, a byte oriented Twowire Serial Interface, a 6-channel ADC (eight channels in TQFP and QFN/MLF packages) with 10-bit accuracy, a programmable Watchdog Timer with Internal Oscillator, an SPI serial port, and five software selectable power saving modes. The Idle mode stops the CPU while allowing the SRAM, Timer/Counters, SPI port, and interrupt system to continue functioning. The Powerdown mode saves the register contents but freezes the Oscillator, disabling all other chip functions until the next Interrupt or Hardware Reset. In Power-save mode, the asynchronous timer continues to run, allowing the user to maintain a timer base while the rest of the device is sleeping. The ADC Noise Reduction mode stops the CPU and all I/O modules except asynchronous timer and ADC, to minimize switching noise during ADC conversions. In Standby mode, the crystal/resonator Oscillator is running while the rest of the device is sleeping. This allows very fast start-up combined with low-power consumption.

## Key Features

Advanced RISC architecture

130 powerful instructions

32 × 8 general purpose working registers

Fully static operation

Up to 16MIPS throughput at 16MHz

On chip 2 cycle multiplier

High endurance non volatile memory segments

8Kbytes of in system self programmable flash program memory

512Bytes EEPROM

1Kbyte internal SRAM

Data retention: 20 years at 85°C/100 years at 25°C

Optional boot code section with independent lock bits

In system programming by On chip boot program

True read-while-write operation

Programming lock for software security

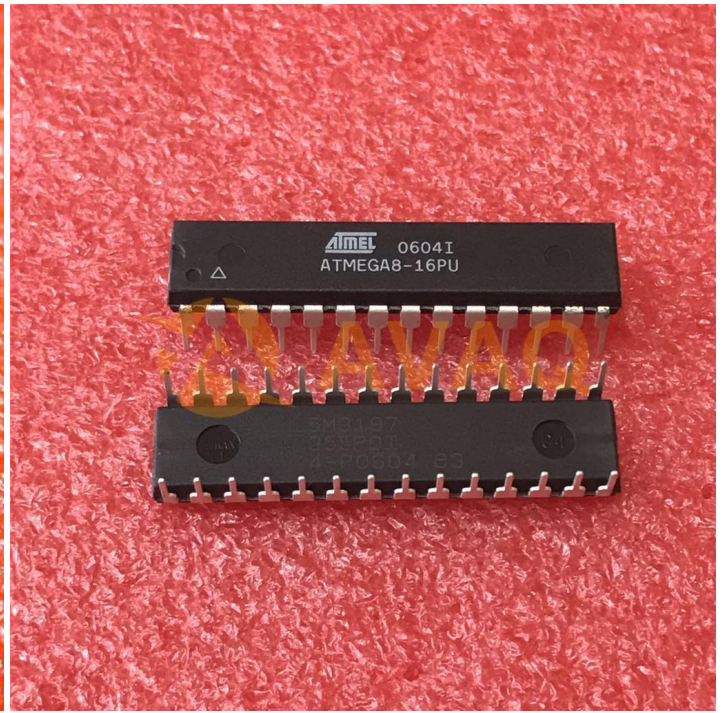
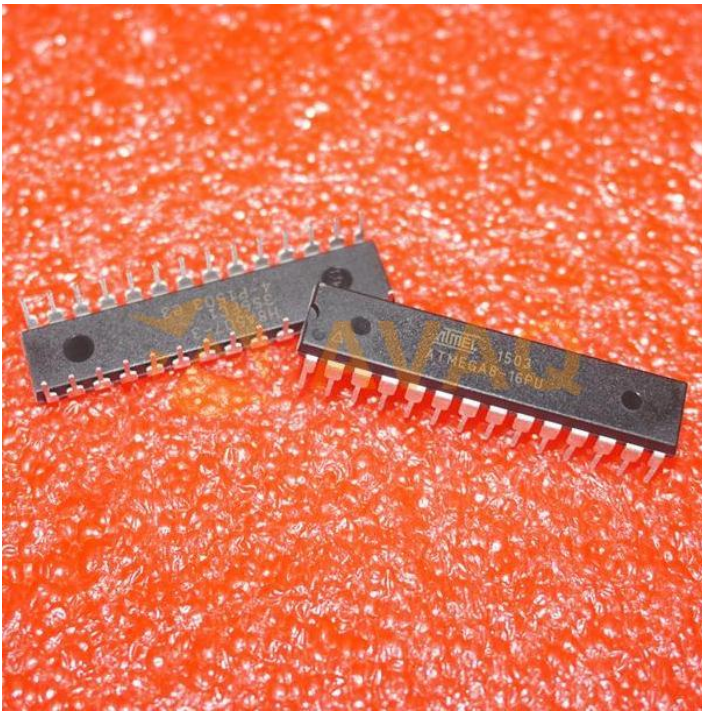
Peripheral features

Real Time Counter with separate oscillator

Three PWM channels

Six Channel, 10 bit accuracy

Byte oriented two wire serial interface



## Recommended For You

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### ATmega162-16PU

Microchip Technology, Inc

DIP40

### AT91RM9200-CJ-002

Microchip Technology, Inc

BGA

### AT89C2051-12PU

Microchip Technology, Inc

DIP

### ATmega8515L-8PU

Microchip Technology, Inc

DIP

### AT91SAM9G20B-CFU

Microchip Technology, Inc

247-TFBGA

### ATtiny20-XUR

Microchip Technology, Inc

TSSOP14

### AT89LS52-16PU

Microchip Technology, Inc

DIP

### ATtiny12L-4SUR

Microchip Technology, Inc

SOP8

### ATmega324PA-PU

Microchip Technology, Inc

PDIP

### ATmega8535-16JU

Microchip Technology, Inc

PLCC44

### ATtiny44A-PU

Microchip Technology, Inc

DIP

### AT89C5131A-S3SUM

Microchip Technology, Inc

PLCC52

### ATmega162V-8PU

Microchip Technology, Inc

DIP40

### AT89C5115-SISUM

Microchip Technology, Inc

PLCC-28

### AT91RM9200-QU-002

Microchip Technology, Inc

QFP208