

ADC0804 8-Bit Analog to Digital Converter IC



Features:

The ADC0804 Analog to Digital Converter IC is a CMOS 8-bit A/D converter using successive approximation. It converts analog input signals into 8-bit digital output and can work with microprocessors or standalone circuits. It includes an on-chip clock, three-state outputs, differential analog input, and supports CMOS and TTL devices, making it useful for sensor circuits, voltage measurement, and analog signal conversion projects.

Specifications	
Part Number	ADC0804
Device Type	Analog to digital converter IC
ADC Resolution	8-bit
Conversion Method	Successive approximation
Output Range	0 to 255 digital output
Input Voltage Range	2.5V to 6.5V
Voltage Measurement Range	0V to 5V with 5V input supply
Supply Voltage	5V
Reference Pin	Vref/2
Step Size at 5V Reference	19.53mV
Conversion Time	110 microseconds
Internal Clock	Yes
Clock Frequency	640kHz
External Clock	Supported through CLK IN
Analog Input Type	Differential analog voltage input
Output Type	Three-state outputs
Microprocessor Interface	Can be used as memory location or I/O port
Logic Compatibility	CMOS and TTL compatible
Zero Adjustment	Not required
Packages	20-pin PDIP and SOIC
Dimensions	2.6x0.9x0.7cm
Applications	Sensor circuits, voltage measurement, temperature measurement, analog signal reading, microcontroller interface
Usage	Converting analog voltage signals into 8-bit digital values for electronics and microcontroller projects

Pinouts:



Pin Number	Type	Description
1	Chip Select (CS)	Used when more than one ADC module is used; grounded by default
2	Read (RD)	Grounded to read the analog value
3	Write (WR)	Pulsed high to start data conversion
4	CLK IN	External clock input, or RC can be used for internal clock access
5	Interrupt (INTR)	Goes high for interrupt request
6	Vin (+)	Differential analog input positive; connect to ADC input
7	Vin (-)	Differential analog input negative; connect to ground
8	Ground	Analog ground pin connected to circuit ground
9	Vref/2	Reference voltage for ADC conversion
10	Ground	Digital ground pin connected to circuit ground
11	Data Bit 0	Digital output data bit 0
12	Data Bit 1	Digital output data bit 1
13	Data Bit 2	Digital output data bit 2
14	Data Bit 3	Digital output data bit 3
15	Data Bit 4	Digital output data bit 4
16	Data Bit 5	Digital output data bit 5
17	Data Bit 6	Digital output data bit 6
18	Data Bit 7	Digital output data bit 7
19	CLK R	RC timing resistor input pin for internal clock generation
20	Vcc	Powers the ADC module, use +5V