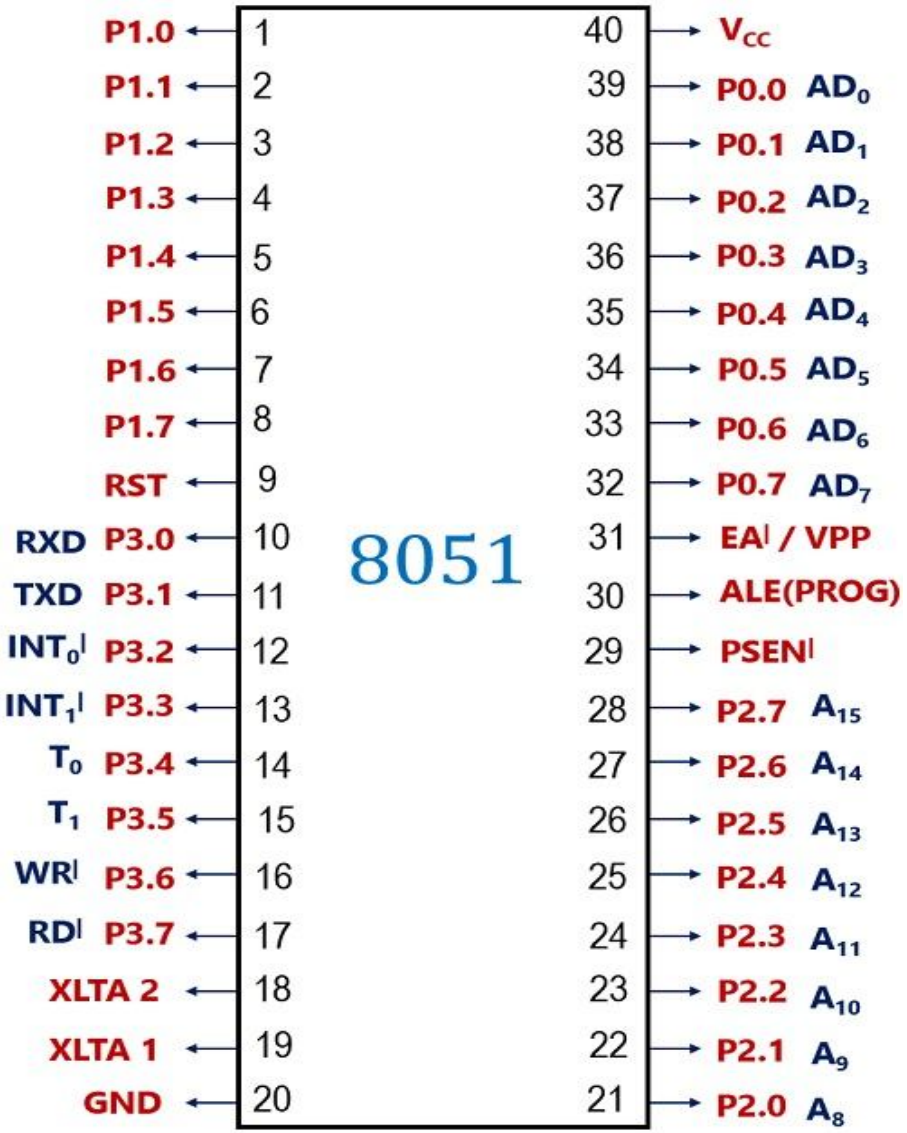
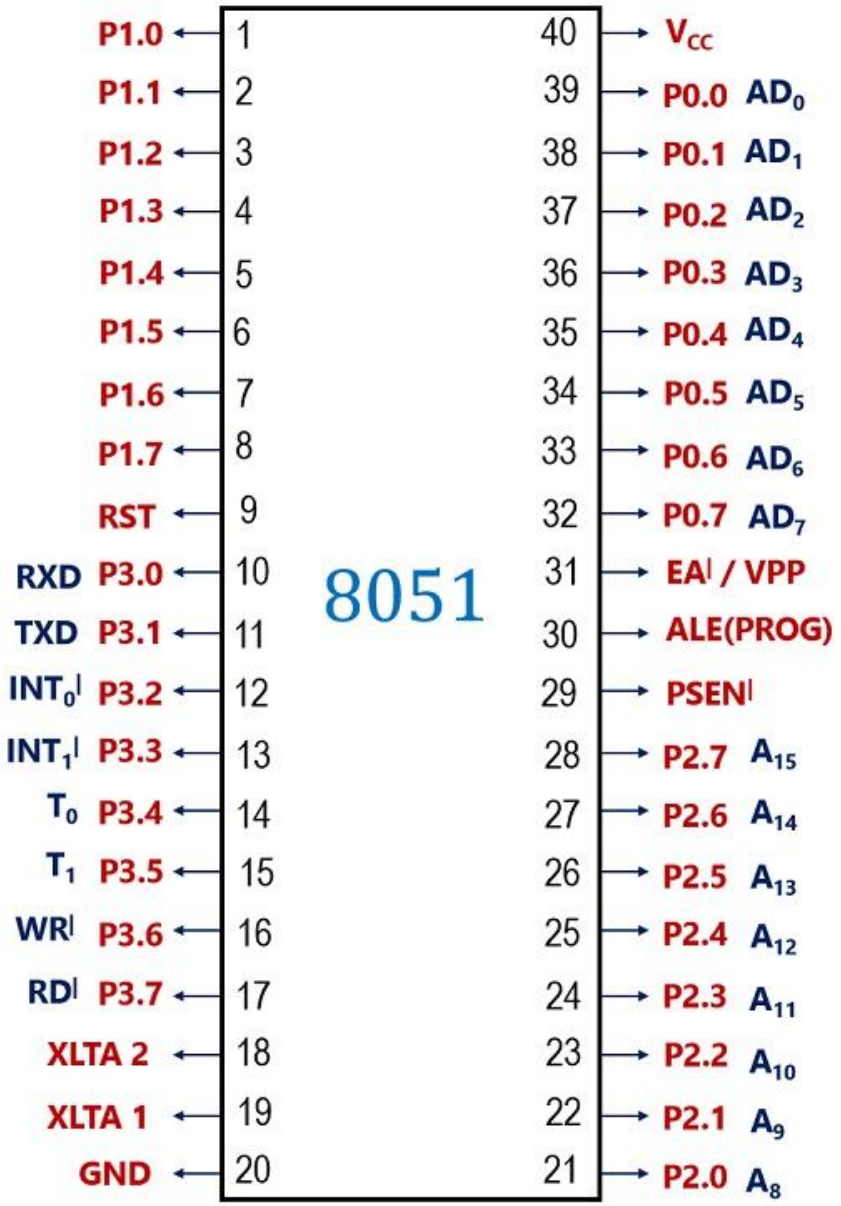


Pin diagram of 8051 Microcontroller

Electronics Desk



Pin diagram of 8051 Microcontroller

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1.V_{CC} (*Pin number 40)* –

8051 operates on +5 V of the supply voltage. Thus this pin is assigned to V_{CC} at which the supply voltage is provided.

2.**GND** (***Pin number 20***)-

This pin is allotted to ground, that passes the excess current of the microcontroller to the ground.

3. **I/O PORTS-**

32 pins are used for implementing 4 parallel ports P0,P1,P2 and P3. All the ports are 8 bit. They are bidirectional data ports. Each of the port except P1 have dual functions.

Pin diagram of 8051 Microcontroller

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i) Port0 i.e. P0-

Pin no. 39 to 32-These eight pins acts as bidirectional I/O ports as well as multiplexed data and address bus. These input and output lines are used for the accessing of external memory. Here lower order address and data bus (i.e., AD_0 to AD_7) are multiplexed together with the I/O ports.

Pin diagram of 8051 Microcontroller

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ii) <u>Port 1 i.e P1-</u>

Pin no. 1 to 8-

P1 is used as simple I/O port. It does not handle dual function.

iii) <u>Port 2 i.e. P2-</u>

These pins are assigned bidirectional I/O port 2. Also when external memory is needed to be accessed then these pins act as higher order address bus (i.e., A_8 to A_{15}).

Pin diagram of 8051 Microcontroller

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iv) Port 3 i.e. P3-

Pin number 10 to 17

These pins are bidirectional I/O ports. Along with this, all the pins in port 3 acts as multipurpose pins.

Port pin	Function	description
P3.0	RxD	Serial communication
P3.1	TxD	Serial communication
P3.2	INT0 '	External interrupt
P3.3	INT1 ‘	External interrupt
P3.4	T0	External pulses for counting
P3.5	T1	External pulses for counting
P3.6 P3.7	WR ‘ RD ‘	Write Read

Pin diagram of 8051 Microcontroller

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4. RESET- RST –Pin no.9

It is an active high input.

When the signal on tjis pin is activated, the microcontroller will terminate all the activities and reset itself. It is referred as power on reset.

5. XTAL 1 & XTAL2-

Pin no. 18 n 19-

A quartz crystal oscillator is connected to inputs XTAL 1 &XTAL 2.

6. EA'- Pin no 31- It is active low input. EA pin which stands for External Access input. It is used to enable/disable the external memory interfacing.
7. ALE- pin no 30- This is ALE pin which stands for Address Latch Enable. It is used to demultiplex the address-data signal of port.
8. PSEN'- Pin no.29-It is active low pin. This is PSEN pin which stands for Program Store Enable. It is used to read a signal from the external program memory.

Pin diagram of 8051 Microcontroller

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