

P1.0	1	T2	40	V _{CC}
P1.1	2	T2 EX	39	P0.0
P1.2	3		38	P0.1
P1.3	4		37	P0.2
P1.4	5	SS/	36	P0.3
P1.5	6	MOSI	35	P0.4
P1.6	7	MISO	34	P0.5
P1.7	8	SCK	33	P0.6
Reset	9		32	P0.7
P3.0	10	RXD	VPP	/EA
P3.1	11	TXD	PROG/	ALE
P3.2	12	INT0		/PSEN
P3.3	13	INT1	A15	P2.7
P3.4	14	T0	A14	P2.6
P3.5	15	T1	A13	P2.5
P3.6	16	/WR	A12	P2.4
P3.7	17	/RD	A11	P2.3
Xtal2	18		A10	P2.2
Xtal1	19		A9	P2.1
Ground	20		A8	P2.0

MCS 51 / 8051

Symbol	Hex	Meaning
RESET	00	Power on (reset)
EXTI0	03	External interrupt 0
TIMER0	0B	Timer 0 interrupt
EXTI1	13	External interrupt 1
TIMER1	1B	Timer 1 interrupt
SINT	23	Serial port interrupt
	2B	Expansion interrupts
	33	Your ID
	80	Begin program

Program Memory - Internal

Symbol	Name	Address
ACC	Accumulator	0E0H
B	B or multiplication register	0F0H
PSW	Program Status Word	0D0H
TH2+	Timer/Counter 2 High Byte	0CDH
TL2+	Timer/Counter 2 Low Byte	0CCH
RCAP2H+	T/C 2 Capture Reg. High Byte	0CBH
RCAP2L+	T/C 2 Capture Reg. Low Byte	0CAH
T2MOD+	Timer/Counter 2 Mode Control	0C9H
T2CON+	Timer/Counter 2 Control	0C8H
IP	Interrupt Priority Control	0B8H
P3	Port 3	0B0H
IE	Interrupt Enable Control	0A8H
P2	Port 2	0A0H
SBUF	Serial Data Buffer	99H
SCON	Serial Control	98H
P1	Port 1	90H
TH1	Timer/Counter 1 High Byte	8DH
TH0	Timer/Counter 0 High Byte	8CH
TL1	Timer/Counter 1 Low Byte	8BH
TL0	Timer/Counter 0 Low Byte	8AH
TMOD	Timer/Counter Mode Control	89H
TCON	Timer/Counter Control	88H
PCON	Power Control	87H
DPTR	Data Pointer 2 Bytes	
DPL	Low Byte	82H
DPH	High Byte	83H
SP	Stack Pointer	81H
P0	Port 0	80H

SFR Memory - Internal

<= 8 Bytes =>	
78	7F
70	77
68	6F
60	67
58	5F Scratch
50	57 Pad
48	4F Area
40	47
38	3F
30	37
28	...7F
20	0... 27 Segment
18	Bank 3 1F
10	Bank 2 17 Register
08	Bank 1 0F Banks
00	Bank 0 07

Data Memory - Internal