



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Coimbatore-35

sns
INSTITUTIONS

DEPARTMENT OF BIOMEDICAL ENGINEERING

8051 - Special Function Registers

III Year/ VI Sem

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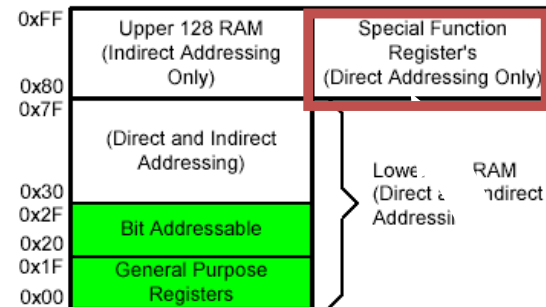


Special Function Registers

□ DATA registers

□ CONTROL registers

- ❖ Timers
- ❖ Serial ports
- ❖ Interrupt system
- ❖ Analog to Digital converter
- ❖ Digital to Analog converter
- ❖ Etc.



Addresses 80h - FFh

Direct Addressing used
to access SPRs



Bit Addressable RAM

Byte address	Bit address									Byte address	Bit address								
98	9F	9E	9D	9C	9B	9A	99	98	SCON	FF									
										F0	F7	F6	F5	F4	F3	F2	F1	F0	B
90	97	96	95	94	93	92	91	90	P1	E0	E7	E6	E5	E4	E3	E2	E1	E0	ACC
8D	not bit addressable								TH1										
8C	not bit addressable								TH0	D0	D7	D6	D5	D4	D3	D2	-	D0	PSW
8B	not bit addressable								TL1										
8A	not bit addressable								TL0	B8	-	-	-	BC	BB	BA	B9	B8	IP
89	not bit addressable								TMOD										
88	8F	8E	8D	8C	8B	8A	89	88	TCON	B0	B7	B6	B5	B4	B3	B2	B1	B0	P3
87	not bit addressable								PCON										
										A8	AF	-	-	AC	AB	AA	A9	A8	IE
83	not bit addressable								DPH										
82	not bit addressable								DPL	A0	A7	A6	A5	A4	A3	A2	A1	A0	P2
81	not bit addressable								SP										
80	87	86	85	84	83	82	81	80	P0	99	not bit addressable								SBUF



SFR MEMORY MAP

8 Bytes

F8								FF
F0	B							F7
E8								EF
E0	ACC							E7
D8								DF
D0	PSW							D7
C8	T2CON		RCAP2L	RCAP2H	TL2	TH2		CF
C0								C7
B8	IP							BF
B0	P3							B7
A8	IE							AF
A0	P2							A7
98	SCON	SBUF						9F
90	P1							97
88	TCON	TMOD	TL0	TL1	TH0	TH1		8F
80	P0	SP	DPL	DPH			PCON	87

↑
Bit
Addressable

Figure 5