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AS31: 8051 Family Instruction Set

INSTRUCTION		BYTES	CYCLES
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ACALL	addr11	2	24
ADD	A, #data8	2	12
ADD	A, @Ri	1	12
ADD	A, Rn	1	12
ADD	A, direct	2	12
ADDC	A, #data8	2	12
ADDC	A, @Ri	1	12
ADDC	A, Rn	1	12
ADDC	A, direct	2	12
AJMP	addr11	2	24
ANL	A, #data8	2	12
ANL	A, @Ri	1	12
ANL	A, Rn	1	12
ANL	A, direct	2	12
ANL	C, /bit	2	24
ANL	C, !bit	2	24
ANL	C, bit	2	24
ANL	direct, #data8	3	24
ANL	direct, A	2	12
CJNE	@Ri, #data8, rel	3	24
CJNE	A, #data8, rel	3	24
CJNE	A, direct, rel	3	24
CJNE	Rn, #data8, rel	3	24
CLR	A	1	12
CLR	C	1	12
CLR	bit	2	12
CPL	A	1	12
CPL	C	1	12
CPL	bit	2	12
DA	A	1	12
DEC	@Ri	1	12
DEC	A	1	12
DEC	DPTR	1	12
DEC	Rn	1	12
DEC	direct	2	12
DIV	AB	1	48
DJNZ	Rn, rel	2	24
DJNZ	direct, rel	3	24
INC	@Ri	1	12
INC	A	1	12
INC	DPTR	1	24
INC	Rn	1	12
INC	direct	2	12
JB	bit, rel	3	24
JBC	bit, rel	3	24
JC	relative	2	24
JMP	@A + DPTR	1	24
JMP	@DPTR + A	1	24
JNB	bit, rel	3	24

JNC	relative	2	24
JNZ	relative	2	24
JZ	relative	2	24
LCALL	addr16	3	24
LJMP	addr16	3	24
MOV	@Ri, #data8	2	12
MOV	@Ri, A	1	12
MOV	@Ri, direct	2	24
MOV	A, #data8	2	12
MOV	A, @Ri	1	12
MOV	A, Rn	1	12
MOV	A, direct	2	12
MOV	C, bit	2	12
MOV	DPTR, #data16	3	24
MOV	Rn, #data8	2	12
MOV	Rn, A	1	12
MOV	Rn, direct	2	24
MOV	bit, C	2	24
MOV	direct, #data8	3	24
MOV	direct, @Ri	2	24
MOV	direct, A	2	12
MOV	direct, Rn	2	24
MOV	direct, direct	3	24
MOVC	A, @A + DPTR	1	24
MOVC	A, @A + PC	1	24
MOVC	A, @DPTR + A	1	24
MOVC	A, @PC + A	1	24
MOVX	@DPTR, A	1	12
MOVX	@Ri, A	1	24
MOVX	A, @DPTR	1	24
MOVX	A, @Ri	1	24
MUL	AB	1	48
NOP		1	12
ORL	A, #data8	2	12
ORL	A, @Ri	1	12
ORL	A, Rn	1	12
ORL	A, direct	2	12
ORL	C, /bit	2	24
ORL	C, !bit	2	24
ORL	C, bit	2	24
ORL	direct, #data8	3	24
ORL	direct, A	2	12
POP	direct	2	24
PUSH	direct	2	24
RET		1	24
RETI		1	24
RL	A	1	12
RLC	A	1	12
RR	A	1	12
RRC	A	1	12
SETB	A	1	12
SETB	bit	2	12
SJMP	relative	2	24
SUBB	A, #data8	2	12
SUBB	A, @Ri	1	12
SUBB	A, Rn	1	12
SUBB	A, direct	2	12
SWAP	A	1	12
XCH	A, #data8	2	12
XCH	A, @Ri	1	12
XCH	A, Rn	1	12
XCH	A, direct	2	12
XCHD	A, #data8	2	12
XCHD	A, @Ri	1	12
XCHD	A, Rn	1	12

XCHD	A, direct	2	12
XRL	A, #data8	2	12
XRL	A, @Ri	1	12
XRL	A, Rn	1	12
XRL	A, direct	2	12
XRL	direct, #data8	3	12
XRL	direct, A	2	12

AS31, An Intel 8031/8051 assembler, Ken Stauffer (University of Calgary)

Minor changes and HTML markup, Paul Stoffregen

<http://www.pjrc.com/tech/8051/tools/as31-inst.html>

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