

Dados ULA e Gerador de Constantes

1. Operações e sinais de seleção da ULA

Operação	OP3	OP2	OP1	OP0	Bloco	S2	S1	S0
ADD	0	0	0	0	ADD	0	0	0
ADC	0	0	0	1	ADD	0	0	0
SUB	0	0	1	0	SUB	0	0	1
SBB	0	0	1	1	SUB	0	0	1
INV	0	1	0	0	INV	0	1	0
AND	0	1	0	1	AND	0	1	1
OR	0	1	1	0	OR	1	0	0
XOR	0	1	1	1	XOR	1	0	1
RAL	1	0	0	0	SHIFTL	1	1	0
RLC	1	0	0	1	SHIFTL	1	1	0
SHL	1	0	1	0	SHIFTL	1	1	0
SAL	1	0	1	1	SHIFTL	1	1	0
RAR	1	1	0	0	SHIFTR	1	1	1
RRC	1	1	0	1	SHIFTR	1	1	1
SHR	1	1	1	0	SHIFTR	1	1	1
SAR	1	1	1	1	SHIFTR	1	1	1

2. Sobre a geração de C (CARRY), AC (A CARRY), RIN, LIN

Operação	OP3	OP2	OP1	OP0	C	AC	RIN	LIN
ADD	0	0	0	0	COOUT	ACOUT	CARRY (*)	CARRY (*)
ADC	0	0	0	1	COOUT	ACOUT	LOUT (*)	LOUT (*)
SUB	0	0	1	0	BOOUT	ABOUT	0 (*)	0 (*)
SBB	0	0	1	1	BOOUT	ABOUT	0 (*)	0 (*)
INV	0	1	0	0	0	0	CARRY (*)	CARRY (*)
AND	0	1	0	1	0	0	ROUT (*)	ROUT (*)
OR	0	1	1	0	0	0	0 (*)	0 (*)
XOR	0	1	1	1	0	0	LOUT (*)	LOUT (*)
RAL	1	0	0	0	LOUT	ACOUT	CARRY	CARRY (*)
RLC	1	0	0	1	LOUT	ACOUT	LOUT	LOUT (*)
SHL	1	0	1	0	LOUT	ABOUT	0	0 (*)
SAL	1	0	1	1	LOUT	ABOUT	0	0 (*)
RAR	1	1	0	0	ROUT	0	CARRY (*)	CARRY
RRC	1	1	0	1	ROUT	0	ROUT (*)	ROUT
SHR	1	1	1	0	ROUT	0	0 (*)	0
SAR	1	1	1	1	ROUT	0	LOUT (*)	LOUT

(*) Valores irrelevantes, já que o bloco da ALU selecionado está inativo.

3. Sinais para o gerador de constantes

Constante	EK	SK1	SK0
00000000	1	0	0
00000001	1	0	1
00000110	1	1	0
01100000	1	1	1