16 Bits 8 registradores

Instrução	Operação	Tipo	15	14	13	3 1	2	11	10	9	8	7	6	5	4	3	2	1	0
NOP	nop	NOP	0	0	0	()	0	0	0	0	0	0	0	0	0	0	0	0
HALT	halt	HALT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MOV Rd, Rm	Rd = Rm	MOV	0	0	0	1	1	0	Rd_2	$Rd_{_1}$	Rd_{o}	Rm_2	$Rm_{_1}$	Rm₀	-	-	-	-	-
MOV Rd, #Im	Rd = #Im	MOV	0	0	0	1	L	1	Rd_2	Rd_{1}	Rd_{o}	Im ₇	Im ₆	Im ₅	Im ₄	lm ₃	Im ₂	$Im_{_1}$	Im _o
STR [Rm], Rn	[Rm] = Rn	STORE	0	0	1	()	0	-	-	-	Rm ₂	$Rm_{_1}$	Rm_0	$Rn_{_2}$	$Rn_{_1}$	$Rn_{_{0}}$	-	-
STR [Rm], #Im	[Rm] = #Im	STORE	0	0	1	()	1	Im ₇	Im_6	Im_{5}	Rm_2	$Rm_{_1}$	Rm₀	Im_4	Im ₃	lm_2	$Im_{_1}$	Im _o
LDR Rd, [Rm]	Rd =[Rm]	LOAD	0	0	1	1	L	-	Rd_2	$Rd_{_{1}}$	Rd_{\circ}	Rm ₂	Rm ₁	Rm₀	-	-	-	-	-
ADD Rd, Rm, Rn	Rd = Rm + Rn	ULA	0	1	0	()	-	Rd_2	$Rd_{_{1}}$	Rd_{\circ}	Rm ₂	$Rm_{_{1}}$	Rm_0	$Rn_{_2}$	$Rn_{_1}$	$Rn_{_{0}}$	-	-
SUB Rd, Rm, Rn	Rd = Rm - Rn	ULA	0	1	0	1	1	-	Rd_2	Rd_{1}	Rd_{\circ}	Rm ₂	$Rm_{_1}$	Rm₀	$Rn_{_2}$	$Rn_{_1}$	$Rn_{_{0}}$	-	-
MUL Rd, Rm, Rn	Rd = Rm * Rn	ULA	0	1	1	()	-	Rd_2	Rd_{1}	Rd_{\circ}	Rm ₂	$Rm_{_{1}}$	Rm₀	Rn_2	$Rn_{_1}$	$Rn_{_{0}}$	-	-
AND Rd, Rm, Rn	Rd = Rm and Rn	ULA	0	1	1	1	L	-	Rd_2	Rd_{1}	Rd_{\circ}	Rm ₂	$Rm_{_1}$	Rm_0	$Rn_{_2}$	$Rn_{_1}$	$Rn_{_{0}}$	-	-
ORR Rd, Rm, Rn	Rd = Rm or Rn	ULA	1	0	0	()	-	Rd_2	Rd_{1}	Rd_{\circ}	Rm ₂	Rm ₁	Rm_0	$Rn_{_2}$	$Rn_{_1}$	$Rn_{_{0}}$	-	-
NOT Rd, Rm	Rd = ¬Rm	ULA	1	0	0	1	L	-	Rd_2	Rd_{1}	Rd_{\circ}	Rm ₂	$Rm_{_{1}}$	Rm_0	-	-	-	-	-
XOR Rd, Rm, Rn	Rd = Rm xor Rn	ULA	1	0	1	()	-	Rd_2	Rd_{1}	Rd_{\circ}	Rm ₂	Rm ₁	Rm_{o}	Rn ₂	$Rn_{_1}$	$Rn_{_{0}}$	-	-
Instrução	Operação	Tipo	15	14				10	9	8	7		5	5	4	3	2	1	0
PSH Rn	[SP] = Rn; SP	PILHA	0	0	0	0	0						-	-	Rn_2	Rn_1	Rn_0		1
POP Rd	SP + +; Rd = [SP]	PILHA	0	0	0	0	0	Rd	2 Rd	l ₁ R			_	- D	- D	_ D	- D	1	0
CMP Rm, Rn	Z = (Rm = Rn)?1:0; C = (Rm < Rn)?1:0	ULA	0	0	0	0	0	_	_	_	ŀ	lm ₂	km ₁	Rm_0	Rn ₂	Rn ₁	Rn_0	1	1
IMP #Im	PC = PC + #Im	DESVIO	0	0	0	0	1	Im	8 Im	7 ln	n ₆ I	m ₅	m ₄	Im ₃	Im ₂	Im ₁	Im_0	0	0
JEQ #Im	PC = PC + #Im, se		0	0	0	0	1	lm					m ₄	Im ₃	Im ₂	Im ₁	Im_0	0	1
II T. #I	Z=1 e $C=0$	DECUIO	0	0	0	0	,	Υ	Υ	Υ				Υ	Υ	Υ	Υ		0
JLT #Im	PC = PC + #Im, se $Z = 0$ e $C = 1$	DESVIO	0	0	0	0	1	Im	8 Im	17 In	n ₆ l	m ₅	m_4	Im ₃	Im ₂	Im ₁	Im_0	1	0
JGT #Im	PC = PC + #Im, se	DESVIO	0	0	0	0	1	lm	₈ Im	17 In	n ₆ I	m ₅]	m ₄	Im_3	Im_2	Im_1	Im_0	1	1
DVD I	Z = 0 e C = 0	D (0						ъ.	ъ.		,							0	
IN Rd	$Rd = 10_{read} (70)$	E/S	1	1	1	1	_	Rd	2 Rd	l ₁ K	d ₀ –		-	_	_	_	_	0	1
OUT Rm	$IO_wite = Rm$	E/S	1	1	1	1	0	-	_	_	F	m_2	Rm_1	Rm_0	_	-	-	1	0
OUT #Im	IO write = #Im	E/S	1	1	1	1	1	Im	7 Im	6 In	n ₅ 0)	0	Im_4	Im_3	Im_2	Im_1	Im_0
SHR Rd, Rm, #Im	$Rd = Rm \gg \#Im$	ULA	1	0	1	1	-	Rd	2 Rd	l ₁ R	d_0 F	m_2	Rm ₁	Rm_0	Im_4	Im_3	Im_2	Im_1	Im_0
SHL Rd, Rm, #lm	Rd = Rm ≪ #Im	ULA	1	1	0	0		Rd	2 Rd	l. R	d ₀ F	.m ₂	Rm ₁	Rm_0	Im 4	Im ₃	Im ₂	Im ₁	Im_0
oriz Raj Riii, "Ilii	rid – rim « "im	OBN	•	•	Ü	Ü		Itu	2 110	.,	a 0 1		· Cini	Kiii	11114	11113	11112	11111	11110
ROR Rd, Rm	$Rd = Rm \gg 1;$	ULA	1	1	0	1	-	Rd	2 Rd	l ₁ R	d_0 F	m_2	Rm_1	Rm_0	-	-	-	-	-
	Rd(MSB) = Rm(LSB)																		
ROL Rd, Rm	$Rd = Rm \ll 1;$	ULA	1	1	1	0	-	Rd	2 Rd	l ₁ R	d ₀ F	m ₂	Rm ₁	Rm ₀	-	-	-	-	-
	Rd(LSB) = Rm(MSB)																		