Vectorial Processor ISA Resume

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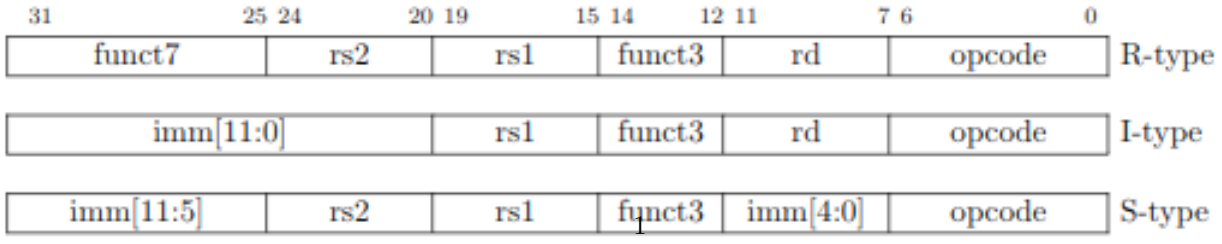
1. Instrucciones

No.	Name	Operands	Expresion	funct7	funct3	Opcode	type
1	ADDVV	vxd,vx1,vx2	$vxd[i] = vx1[i] + vx2[i]$	0000000	000	1000000	V
2	SUBVV	vxd,vx1,vx2	$vxd[i] = vx1[i] - vx2[i]$	0000000	000	1000001	V
3	MULVV	vxd,vx1,vx2	$vxd[i] = vx1[i] * vx2[i]$	0000000	000	1000010	V
4	DIVVV	vxd,vx1,vx2	$vxd[i] = vx1[i]/vx2[i]$	0000000	000	1000011	V
5	SLEVV	vxd,vx1,vx2	$vxd[i] = vx1[i] << vx2[i]$	0000000	001	0000000	V
6	SREVV	vxd,vx1,vx2	$vxd[i] = vx1[i] >> vx2[i]$	0000000	001	0000010	V
7	XOREVV	vxd,vx1,vx2	$vxd[i] = vx1[i]^v x2[i]$	0000000	001	0000100	V
8	OWNEP	vxd,vx1,vx2	$vxd[i] = vx1[i] * *vx2[i]$	0000000	001	0000110	V
9	SLDVV	vxd,vx1,vx2	$vxd[i] = vx1[i] << vx2[i]$	0000000	010	0000000	V
10	SRDVV	vxd,vx1,vx2	$vxd[i] = vx1[i] >> vx2[i]$	0000000	010	0000010	V
11	XORDVV	vxd,vx1,vx2	$vxd[i] = vx1[i]^v x2[i]$	0000000	010	0000100	V
12	OWNDP	vxd,vx1,vx2	$vxd[i] = sqrt(vx1[i], vx2[i])$	0000000	010	0000110	V
13	ADDVS	vxd,vx1,imm	$vxd[i] = vx1[i] + imm$	-	000	1000100	I
14	SUBVS	vxd,vx1,imm	$vxd[i] = vx1[i] - imm$	-	000	1000101	I
15	SUBSV	vxd,vx1,imm	$vxd[i] = imm - vx1[i]$	-	000	1000110	I
16	MULVS	vxd,vx1,imm	$vxd[i] = vx1[i] * imm$	-	000	1000111	I
17	DIVVS	vxd,vx1,imm	$vxd[i] = vx1[i]/imm$	-	000	1001000	I
18	DIVSV	vxd,vx1,imm	$vxd[i] = imm/vx1[i]$	-	000	1001001	I
19	LV	vxd,sx1	$vxd = MEM[sx1]$	-	000	1001010	I
20	LSI	sxd,sx1	$sxd = imm$	-	000	1001011	I
21	LSM	sxd,sx1,imm	$sxd = MEM[sx1]$	-	000	1001100	I
22	LVWS	vxd,sx1,imm	$vxd = MEM[sx1 + imm]$	-	000	1001101	I
23	SLEVS	vxd,vx1,imm	$vxd[i] = vx1[i] << imm$	-	001	0000001	I
24	SREVS	vxd,vx1,imm	$vxd[i] = vx1[i] >> imm$	-	001	0000011	I
25	XOREVS	vxd,vx1,imm	$vxd[i] = vx1[i]^v x2[i]$	-	001	0000101	I
26	SLDVS	vxd,vx1,imm	$vxd[i] = vx1[i] << imm$	-	010	0000001	I
27	SRDVS	vxd,vx1,imm	$vxd[i] = vx1[i] >> imm$	-	010	0000011	I
28	XORDVS	vxd,vx1,imm	$vxd[i] = vx1[i]^i mm$	-	010	0000101	I
29	SV	vx1,imm	$MEM[imm] = vx1$	-	000	1001110	S
30	SVWS	vx1,sx1,imm	$MEM[sx1 + imm] = vx1$	-	000	1001111	S
31	SS	vx1,imm	$MEM[imm] = sx1$	-	000	1010000	S

2. Tipos de Instrucción



3. Registros

Name	Purpose
s0	Registro con constante cero
s1 - s10	Registros de proposito General
s11 - s14	Registros para operaciones con escalares Escalares
s15	Registro para el PC
v1 - v2	Registros para operar vectores
v3	Registro de vector resultante

4. Modos de Direcccionamiento

- Absoluto:
- Ejemplo: LV v1, 0x004c $\rightarrow dir = 0x004c$

- Relativo:
- Ejemplo: SVWS (0X0020, s4), v2 $\rightarrow dir = s4 + 0x0020$