

	op	func_pos	func	sub_func_pos	sub_func	imm_pos	imm_extend	read_addr_0_buf	read_addr_1_buf	read_n0_buf	read_n1_buf	alu_op	operand_0	operand_1	write_en	write_addr	mem_en	mem_wrote_en	write_mem_data	twrit_e_en	sp_wrote_en	hi_wrote_en	lo_wrote_en	BRANCH_EN	BRANCH_PC	IS_LOAD	cp0_read_addr	cp0_read_en
NOP	00001							rx	ry	1	1	X	X	X	0	X	0	X	X	0	0	X	X	0	X	0	X	0
B	00010					10:0	sign	rx	ry	0	0	X	X	X	0	X	0	X	X	0	0	X	X	1	b_pc	0	X	0
BEQZ	00100					7:0	sign	rx	ry	1	0	X	X	X	0	X	0	X	X	0	0	X	X	reg_0_eq_0	cb_pc	0	X	0
BNEZ	00101					7:0	sign	rx	ry	1	0	X	X	X	0	X	0	X	X	0	0	X	X	not reg_0_eq_0	cb_pc	0	X	0
SLL	00110	1:0	00			4:2	shift	rx	ry	0	1	alu_sll	READ_DATA_1	shamt_buff	1	rx	0	X	X	0	0	X	X	0	X	0	X	0
SRA	00110	1:0	11			4:2	shift	rx	ry	0	1	alu_sra	READ_DATA_1	shamt_buff	1	rx	0	X	X	0	0	X	X	0	X	0	X	0
ADDIU3	01000					3:0	sign	rx	ry	1	0	alu_addu	READ_DATA_0	imm4se	1	ry	0	X	X	0	0	X	X	0	X	0	X	0
ADDIU	01001					7:0	sign	rx	ry	1	0	alu_addu	READ_DATA_0	imm8se	1	rx	0	X	X	0	0	X	X	0	X	0	X	0
ADDSP	01100	10:8	011			7:0	sign	rx	ry	0	0	alu_addu	SP	imm8se	0	X	0	X	X	0	1	X	X	0	X	0	X	0
BTEQZ	01100	10:8	000			7:0	sign	rx	ry	0	0	X	X	X	0	X	0	X	X	0	0	X	X	not T	cb_pc	0	X	0
MTSP	01100	10:8	100					rx	ry	0	1	alu_or	READ_DATA_1	zero_word	0	X	0	X	X	0	1	X	X	0	X	0	X	0
LI	01101					7:0	zero	rx	ry	0	0	alu_or	zero_word	imm8ze	1	rx	0	X	X	0	0	X	X	0	X	0	X	0
CMPI	01110					7:0	sign	rx	ry	1	0	alu_cmp	READ_DATA_0	imm8se	1	X	0	X	X	0	0	X	X	0	X	0	X	0
MOVE	01111							rx	ry	0	1	alu_or	READ_DATA_1	zero_word	1	rx	0	X	X	0	0	X	X	0	X	0	X	0
LW_SP	10010					7:0	sign	rx	ry	0	0	alu_addu	SP	imm8se	1	rx	1	0	X	0	0	X	X	0	X	1	X	0
LW	10011					4:0	sign	rx	ry	1	0	alu_addu	READ_DATA_0	imm5se	1	ry	1	0	X	0	0	X	X	0	X	1	X	0
SW_SP	11010					7:0	sign	rx	ry	1	0	alu_addu	SP	imm8se	0	X	1	1	READ_DATA_0	0	0	X	X	0	X	0	X	0
SW	11011					4:0	sign	rx	ry	1	1	alu_addu	READ_DATA_0	imm5se	0	X	1	1	READ_DATA_1	0	0	X	X	0	X	0	X	0
ADDU	11100	1:0	01					rx	ry	1	1	alu_addu	READ_DATA_0	READ_DATA_1	1	rz	0	X	X	0	0	X	X	0	X	0	X	0
SUBU	11100	1:0	11					rx	ry	1	1	alu_subu	READ_DATA_0	READ_DATA_1	1	rz	0	X	X	0	0	X	X	0	X	0	X	0
AND	11101	4:0	01100					rx	ry	1	1	alu_and	READ_DATA_0	READ_DATA_1	1	rx	0	X	X	0	0	X	X	0	X	0	X	0
OR	11101	4:0	01101					rx	ry	1	1	alu_or	READ_DATA_0	READ_DATA_1	1	rx	0	X	X	0	0	X	X	0	X	0	X	0
NOT	11101	4:0	01111					rx	ry	0	1	alu_nor	READ_DATA_1	zero_word	1	rx	0	X	X	0	0	X	X	0	X	0	X	0
CMP	11101	4:0	01010					rx	ry	1	1	alu_cmp	READ_DATA_0	READ_DATA_1	0	X	0	X	X	1	0	X	X	0	X	0	X	0
JR	11101	4:0	00000	7:5	000			rx	ry	1	0	X	X	X	0	X	0	X	X	0	0	X	X	1	READ_DATA_0	0	X	0
MFPC	11101	4:0	00000	7:5	010			rx	ry	0	0	alu_or	PC	zero_word	1	rx	0	X	X	0	0	X	X	0	X	0	X	0
SLLV	11101	4:0	00100					rx	ry	1	1	alu_sll	READ_DATA_1	READ_DATA_0	1	ry	0	X	X	0	0	X	X	0	X	0	X	0
SRAV	11101	4:0	00111					rx	ry	1	1	alu_sra	READ_DATA_1	READ_DATA_0	1	ry	0	X	X	0	0	X	X	0	X	0	X	0
MTIH	11110	4:0	00001					rx	ry	1	1	X	X	X	0	X	0	X	X	0	0	X	X	0	X	0	0	0
MFIH	11110	4:0	00000					rx	ry	1	1	X	X	X	0	X	0	X	X	0	0	X	X	0	X	0	0	1
MFCO	11110	4:0	00000					rx	ry	1	0	X	X	X	0	X	0	X	X	0	0	X	X	0	X	0	imm 7:5	1
MTCO	11110	4:0	00001					rx	ry	1	0	X	X	X	0	X	0	X	X	0	0	X	X	0	X	0	imm 7:5	0