MIPS64 Instruction Format Ver 3.0

*Note: the list is not comprehensive. For full listing, please refer to the book [See MIPS run, 2nd Edition, chapter 8.6].

J-type

Instruction	Opcode (6)	Offset (26)
J Label	2	Label
JAL Label	3	Label

R-type

к-туре						
Instruction	Opcode (6)	RS (5)	RT (5)	RD (5)	(5)	Func (6)
NOP	0	0	0	0	0	0
JR RS	0	RS	0	0	0	8
JALR RS	0	RS	0	31	0	9
MOVZ RD,RS,RT	0	RS	RT	RD	0	10
MOVN RD,RS,RT	0	RS	RT	RD	0	11
MFHI RD	0	0	0	RD	0	16
MTHI RS	0	RS	0	0	0	17
MFLO RD	0	0	0	RD	0	18
MTLO RS	0	RS	0	0	0	19
DSLLV RD,RS,RT	0	RS	RT	RD	0	20
DSRLV RD,RS,RT	0	RS	RT	RD	0	22
DSRAV RD,RS,RT	0	RS	RT	RD	0	23
DMULT RS,RT	0	RS	RT	0	0	28
DMULTU RS,RT	0	RS	RT	0	0	29
DDIV RS,RT	0	RS	RT	0	0	30
DDIVU RS,RT	0	RS	RT	0	0	31
AND RD,RS,RT	0	RS	RT	RD	0	36
OR RD,RS,RT	0	RS	RT	RD	0	37
XOR RD,RS,RT	0	RS	RT	RD	0	38
NOR RD,RS,RT	0	RS	RT	RD	0	39
SLT RD,RS,RT	0	RS	RT	RD	0	42
SLTU RD,RS,RT	0	RS	RT	RD	0	43
DADDU RD,RS,RT	0	RS	RT	RD	0	45
DSUBU RD,RS,RT	0	RS	RT	RD	0	47
MADD RS,RT	28	RS	RT	0	0	0

R-type (Shift)

Instruction	Opcode (6)	RS (5)	RT (5)	RD (5)	SHF (5)	Func (6)
DSLL RD,RS,SHF	0	0	RS	RD	SHF	56
DSRL RD,RS,SHF	0	0	RS	RD	SHF	58
DSRA RD,RS,SHF	0	0	RS	RD	SHF	59

Extended R-Type

Instruction	Extended R-Type	1	1	1	T	ı	1
DMFCO RD,CS	Instruction	Opcode (6)	Ext Opcode (5)	T (5)	S (5)	D(5)	Func (6)
MTCO RS,CD 16 4 RS CD 0 0 DMTCO RS,CD 16 5 RS CD 0 0 MFC1 RD,FS 17 0 RD FS 0 0 MTC1 RS,FD 17 1 RD FS 0 0 MTC1 RS,FD 17 4 RS FD 0 0 DMTC1 RS,FD 17 4 RS FD 0 0 DMTC1 RS,FD 17 5 RS FD 0 0 ADD,S FD,FS,FT 17 16 FT FS FD 0 ADD,PS FD,FS,FT 17 16 FT FS FD 0 SUB,D FD,FS,FT 17 16 FT FS FD 1 SUB,D FD,FS,FT 17 16 FT FS FD 1 SUB,D FD,FS,FT 17 16 FT FS FD 1 WUL,PS FD,FS,FT	*						
DMTCO RS,CD 16 5 RS CD 0 MFCI RD,FS 17 0 RD FS 0 0 DMFCI RD,FS 17 1 RD FS 0 0 DMTCI RS,FD 17 4 RS FD 0 0 DMTCI RS,FD 17 5 RS FD 0 0 ADD,S FD,FS,FT 17 16 FT FS FD 0 ADD,PS,FS,FT 17 16 FT FS FD 0 ADD,PS FD,FS,FT 17 16 FT FS FD 0 ADD,PS,FD,FS,FT 17 16 FT FS FD 1 SUB,PS FD,FS,FT 17 16 FT FS FD 1 SUB,PS FD,FS,FT 17 16 FT FS FD 1 MUL,PS FD,FS,FT 17 17 FT FS FD 2 DIV,D FD,FS,FT					ļ	_	_
MFC1 RD,FS 17 0 RD FS 0 0 DMFC1 RD,FS 17 1 RD FS 0 0 MTC1 RS,FD 17 4 RS FD 0 0 DMTC1 RS,FD 17 5 RS FD 0 0 ADD.S FD,FS,FT 17 16 FT FS FD 0 ADD.PS FD,FS,FT 17 17 17 FT FS FD 0 ADD.PS FD,FS,FT 17 16 FT FS FD 0 ADD.PS FD,FS,FT 17 16 FT FS FD 1 SUB.D FD,FS,FT 17 16 FT FS FD 1 WUL.PS FD,FS,FT 17 16 FT FS FD 2 MUL.PS FD,FS,FT 17 16 FT FS FD 2 MUL.PS FD,FS,FT 17 16 FT FS FD 2	,						
DMFC1 RD,FS 17 1 RD FS 0 0 MTC1 RS,FD 17 4 RS FD 0 0 DMTC1 RS,FD 17 5 RS FD 0 0 ADD.S FD,FS,FT 17 16 FT FS FD 0 ADD.D FD,FS,FT 17 17 FT FS FD 0 ADD.S FD,FS,FT 17 16 FT FS FD 0 SUB.S FD,FS,FT 17 16 FT FS FD 1 SUB.P SD,FS,FT 17 16 FT FS FD 1 SUB.P SD,FS,FT 17 16 FT FS FD 1 WUL.P SD,FS,FT 17 16 FT FS FD 1 MUL.P SD,FS,FT 17 17 FT FS FD 2 DIV.S FD,FS,FT 17 17 FT FS FD 3 <td< td=""><td>DMTCO RS,CD</td><td></td><td></td><td>RS</td><td></td><td></td><td></td></td<>	DMTCO RS,CD			RS			
MTC1 RS,FD 17 4 RS FD 0 0 DMTC1 RS,FD 17 5 RS FD 0 0 ADD.S FD,FS,FT 17 16 FT FS FD 0 ADD.D FD,FS,FT 17 17 FT FS FD 0 ADD.S FD,FS,FT 17 16 FT FS FD 0 SUB,S FD,FS,FT 17 16 FT FS FD 1 SUB,PS FD,FS,FT 17 16 FT FS FD 1 WUL,D FD,FS,FT 17 16 FT FS FD 1 MUL,D FD,FS,FT 17 17 FT FS FD 2 MUL,D FD,FS,FT 17 17 FT FS FD 2 MUL,D FD,FS,FT 17 16 FT FS FD 2 DIV,D FD,FS,FT 17 17 FT FS FD 3	MFC1 RD,FS	17	0	RD	FS	0	0
DMTCI RS,FD 17 5 RS FD 0 ADD.S FD,FS,FT 17 16 FT FS FD 0 ADD.D FD,FS,FT 17 17 17 FT FS FD 0 ADD.PS FD,FS,FT 17 16 FT FS FD 0 SUB.D FD,FS,FT 17 16 FT FS FD 1 SUB.D FD,FS,FT 17 17 FT FS FD 1 SUB.D FD,FS,FT 17 16 FT FS FD 1 MUL.S FD,FS,FT 17 16 FT FS FD 2 MUL.PS FD,FS,FT 17 16 FT FS FD 2 MUL.PS FD,FS,FT 17 16 FT FS FD 2 DIV.S FD,FS,FT 17 17 FT FS FD 3 DIV.PS FD,FS,FT 17 17 17 FT FS FD 3	DMFC1 RD,FS		1	RD	FS	0	0
ADD.S FD,FS,FT 17 16 FT FS FD 0 ADD.D FD,FS,FT 17 17 17 FT FS FD 0 ADD.PS FD,FS,FT 17 17 17 FT FS FD 0 SUB.S FD,FS,FT 17 16 FT FS FD 1 SUB.PS FD,FS,FT 17 17 FT FS FD 1 MUL.S FD,FS,FT 17 16 FT FS FD 2 MUL.PS FD,FS,FT 17 17 FT FS FD 2 MUL.PS FD,FS,FT 17 17 FT FS FD 2 MUL.PS FD,FS,FT 17 16 FT FS FD 2 DIV.D FD,FS,FT 17 17 17 FT FS FD 3 DIV.D FD,FS,FT 17 17 17 FT FS FD 3 DIV.D FD,FS 17 17 <td< td=""><td>,</td><td>17</td><td></td><td>RS</td><td>FD</td><td>0</td><td>0</td></td<>	,	17		RS	FD	0	0
ADD.D FD,FS,FT 17 17 FT FS FD 0 ADD.PS FD,FS,FT 17 22 FT FS FD 0 SUB.S FD,FS,FT 17 16 FT FS FD 1 SUB.PS FD,FS,FT 17 17 17 FT FS FD 1 SUB.PS FD,FS,FT 17 16 FT FS FD 1 MUL.D FD,FS,FT 17 16 FT FS FD 2 MUL.PS FD,FS,FT 17 16 FT FS FD 2 MUL.PS FD,FS,FT 17 16 FT FS FD 2 MUL.PS FD,FS,FT 17 16 FT FS FD 2 DIV.PS FD,FS,FT 17 17 FT FS FD 3 DIV.PS FD,FS,FT 17 16 FT FS FD 3 MOV.PS FD,FS 17 16 0 FS FD	DMTC1 RS,FD	17	5	RS	FD	0	0
ADD.PS FD,FS,FT	ADD.S FD,FS,FT	17	16	FT	FS	FD	0
SUB.S FD,FS,FT 17 16 FT FS FD 1 SUB.D FD,FS,FT 17 17 17 FT FS FD 1 SUB.D FD,FS,FT 17 17 17 FT FS FD 1 MUL.D FD,FS,FT 17 17 17 FT FS FD 2 MUL.D FD,FS,FT 17 17 17 FT FS FD 2 MUL.D FD,FS,FT 17 16 FT FS FD 2 MUL.D FD,FS,FT 17 16 FT FS FD 2 DIV.D FD,FS,FT 17 16 FT FS FD 3 DIV.D FD,FS,FT 17 16 0 FS FD 3 DIV.D FD,FS,FT 17 16 0 FS FD 3 DIV.D FD,FS 17 16 0 FS FD 6 MOV.PS FD,FS 17 17 0	ADD.D FD,FS,FT	17	17	FT	FS	FD	0
SUB.D FD,FS,FT 17 17 FT FS FD 1 SUB.PS FD,FS,FT 17 22 FT FS FD 1 MUL.S FD,FS,FT 17 16 FT FS FD 2 MUL.D FD,FS,FT 17 17 17 FT FS FD 2 MUL.D FD,FS,FT 17 16 FT FS FD 2 DIV.D FD,FS,FT 17 16 FT FS FD 3 DIV.D FD,FS,FT 17 16 FT FS FD 3 DIV.PS FD,FS,FT 17 16 0 FS FD 3 MOV.S FD,FS 17 16 0 FS FD 6 MOV.PS FD,FS 17 22 0 FS FD 6 CVT.S.D FD,FS 17 17 0 FS FD 32 CVT.S.L FD,FS 17 20 0 FS FD 32	ADD.PS FD,FS,FT	17	22	FT	FS	FD	0
SUB.PS FD,FS,FT 17 22 FT FS FD 1 MUL.S FD,FS,FT 17 16 FT FS FD 2 MUL.D FD,FS,FT 17 17 FT FS FD 2 MUL.PS FD,FS,FT 17 16 FT FS FD 2 DIV.PS FD,FS,FT 17 16 FT FS FD 3 DIV.PS FD,FS,FT 17 17 17 FT FS FD 3 DIV.PS FD,FS,FT 17 16 FT FS FD 3 DIV.PS FD,FS,FT 17 16 0 FS FD 3 MOV.S FD,FS 17 16 0 FS FD 6 MOV.PS FD,FS 17 22 0 FS FD 6 CVT.S.D FD,FS 17 17 0 FS FD 32 CVT.S.W FD,FS 17 20 0 FS FD 33 <td>SUB.S FD,FS,FT</td> <td>17</td> <td>16</td> <td>FT</td> <td>FS</td> <td>FD</td> <td>1</td>	SUB.S FD,FS,FT	17	16	FT	FS	FD	1
MUL.S FD,FS,FT 17 16 FT FS FD 2 MUL.D FD,FS,FT 17 17 FT FS FD 2 MUL.PS FD,FS,FT 17 22 FT FS FD 2 DIV.S FD,FS,FT 17 16 FT FS FD 3 DIV.PS FD,FS,FT 17 17 FT FS FD 3 DIV.PS FD,FS,FT 17 16 0 FS FD 3 DIV.PS FD,FS,FT 17 16 0 FS FD 3 MOV.S FD,FS 17 16 0 FS FD 6 MOV.PS FD,FS 17 22 0 FS FD 6 CVT.S.D FD,FS 17 17 0 FS FD 32 CVT.S.W FD,FS 17 20 0 FS FD 32 CVT.D.S FD,FS 17 21 0 FS FD 33	SUB.D FD,FS,FT	17	17	FT	FS	FD	1
MUL.D FD,FS,FT 17 17 FT FS FD 2 MUL.PS FD,FS,FT 17 22 FT FS FD 2 DIV.S FD,FS,FT 17 16 FT FS FD 3 DIV.D FD,FS,FT 17 17 17 FT FS FD 3 DIV.D FD,FS,FT 17 16 0 FS FD 3 MOV.S FD,FS 17 16 0 FS FD 6 MOV.D FD,FS 17 22 0 FS FD 6 MOV.PS FD,FS 17 22 0 FS FD 6 CVT.S.D FD,FS 17 17 0 FS FD 32 CVT.S.W FD,FS 17 21 0 FS FD 32 CVT.D.S FD,FS 17 21 0 FS FD 33 CVT.D.W FD,FS 17 20 0 FS FD 33	SUB.PS FD,FS,FT	17	22	FT	FS	FD	1
MUL.PS FD,FS,FT 17 22 FT FS FD 2 DIV.S FD,FS,FT 17 16 FT FS FD 3 DIV.D FD,FS,FT 17 17 17 FT FS FD 3 DIV.PS FD,FS,FT 17 12 FT FS FD 3 MOV.S FD,FS 17 16 0 FS FD 6 MOV.D FD,FS 17 22 0 FS FD 6 MOV.PS FD,FS 17 22 0 FS FD 6 VVT.S.D FD,FS 17 17 0 FS FD 32 CVT.S.W FD,FS 17 20 0 FS FD 32 CVT.D.S FD,FS 17 16 0 FS FD 33 CVT.D.W FD,FS 17 20 0 FS FD 33 CVT.D.L FD,FS 17 16 0 FS FD 36 <td>MUL.S FD,FS,FT</td> <td>17</td> <td>16</td> <td>FT</td> <td>FS</td> <td>FD</td> <td>2</td>	MUL.S FD,FS,FT	17	16	FT	FS	FD	2
DIV.S FD,FS,FT 17 16 FT FS FD 3 DIV.D FD,FS,FT 17 17 FT FS FD 3 DIV.PS FD,FS,FT 17 22 FT FS FD 3 MOV.S FD,FS 17 16 0 FS FD 6 MOV.D FD,FS 17 22 0 FS FD 6 MOV.PS FD,FS 17 22 0 FS FD 6 MOV.PS FD,FS 17 17 0 FS FD 6 CVT.S.D FD,FS 17 17 0 FS FD 32 CVT.S.W FD,FS 17 21 0 FS FD 32 CVT.D.S FD,FS 17 16 0 FS FD 33 CVT.D.W FD,FS 17 21 0 FS FD 33 CVT.W.S FD,FS 17 16 0 FS FD 36 C	MUL.D FD,FS,FT	17	17	FT	FS	FD	2
DIV.D FD,FS,FT 17 17 FT FS FD 3 DIV.PS FD,FS,FT 17 22 FT FS FD 3 MOV.S FD,FS 17 16 0 FS FD 6 MOV.D FD,FS 17 22 0 FS FD 6 MOV.PS FD,FS 17 22 0 FS FD 6 CVT.S.D FD,FS 17 17 0 FS FD 32 CVT.S.W FD,FS 17 20 0 FS FD 32 CVT.D.S FD,FS 17 16 0 FS FD 32 CVT.D.W FD,FS 17 20 0 FS FD 33 CVT.D.L FD,FS 17 21 0 FS FD 33 CVT.W.S FD,FS 17 16 0 FS FD 36 CVT.W.D FD,FS 17 16 0 FS FD 37	MUL.PS FD,FS,FT	17	22	FT	FS	FD	2
DIV.PS FD,FS,FT 17 22 FT FS FD 3 MOV.S FD,FS 17 16 0 FS FD 6 MOV.D FD,FS 17 22 0 FS FD 6 MOV.PS FD,FS 17 22 0 FS FD 6 CVT.S.D FD,FS 17 17 0 FS FD 32 CVT.S.W FD,FS 17 20 0 FS FD 32 CVT.S.L FD,FS 17 16 0 FS FD 32 CVT.D.S FD,FS 17 16 0 FS FD 33 CVT.D.W FD,FS 17 21 0 FS FD 33 CVT.D.L FD,FS 17 16 0 FS FD 36 CVT.W.S FD,FS 17 16 0 FS FD 36 CVT.L.S FD,FS 17 17 17 0 FS FD 37	DIV.S FD,FS,FT	17	16	FT	FS	FD	3
MOV.S FD,FS 17 16 0 FS FD 6 MOV.D FD,FS 17 22 0 FS FD 6 MOV.PS FD,FS 17 22 0 FS FD 6 CVT.S.D FD,FS 17 17 0 FS FD 32 CVT.S.W FD,FS 17 20 0 FS FD 32 CVT.D.S FD,FS 17 16 0 FS FD 32 CVT.D.W FD,FS 17 16 0 FS FD 33 CVT.D.W FD,FS 17 21 0 FS FD 33 CVT.D.FD,FS 17 16 0 FS FD 33 CVT.W.S FD,FS 17 16 0 FS FD 36 CVT.W.D FD,FS 17 17 0 FS FD 37 CVT.L.D FD,FS 17 17 16 FT FS FD 37 <	DIV.D FD,FS,FT	17	17	FT	FS	FD	3
MOV.D FD,FS 17 22 0 FS FD 6 MOV.PS FD,FS 17 22 0 FS FD 6 CVT.S.D FD,FS 17 17 0 FS FD 32 CVT.S.W FD,FS 17 20 0 FS FD 32 CVT.D.S FD,FS 17 16 0 FS FD 33 CVT.D.W FD,FS 17 20 0 FS FD 33 CVT.D.L FD,FS 17 21 0 FS FD 33 CVT.W.S FD,FS 17 16 0 FS FD 36 CVT.W.D FD,FS 17 17 0 FS FD 36 CVT.L.S FD,FS 17 16 0 FS FD 37 CVT.L.D FD,FS 17 17 0 FS FD 37 C.EQ.S FS,FT 17 16 FT FS 0 50 C	DIV.PS FD,FS,FT	17	22	FT	FS	FD	3
MOV.PS FD,FS 17 22 0 FS FD 6 CVT.S.D FD,FS 17 17 0 FS FD 32 CVT.S.W FD,FS 17 20 0 FS FD 32 CVT.S.L FD,FS 17 21 0 FS FD 32 CVT.D.S FD,FS 17 16 0 FS FD 33 CVT.D.W FD,FS 17 21 0 FS FD 33 CVT.W.S FD,FS 17 16 0 FS FD 36 CVT.W.D FD,FS 17 17 0 FS FD 36 CVT.L.S FD,FS 17 16 0 FS FD 37 CVT.L.D FD,FS 17 16 0 FS FD 37 CVT.L.D FD,FS 17 17 17 FT FS 0 50 C.EQ.S FS,FT 17 16 FT FS 0 60	MOV.S FD,FS	17	16	0	FS	FD	6
CVT.S.D FD,FS 17 17 0 FS FD 32 CVT.S.W FD,FS 17 20 0 FS FD 32 CVT.S.L FD,FS 17 21 0 FS FD 32 CVT.D.S FD,FS 17 16 0 FS FD 33 CVT.D.W FD,FS 17 21 0 FS FD 33 CVT.D.L FD,FS 17 16 0 FS FD 33 CVT.W.S FD,FS 17 16 0 FS FD 36 CVT.W.D FD,FS 17 17 0 FS FD 36 CVT.L.S FD,FS 17 16 0 FS FD 37 CVT.L.D FD,FS 17 17 0 FS FD 37 CVT.L.D FD,FS 17 17 17 FT FS 0 50 C.EQ.S FS,FT 17 17 17 FT FS 0	MOV.D FD,FS	17	22	0	FS	FD	6
CVT.S.W FD,FS 17 20 0 FS FD 32 CVT.S.L FD,FS 17 21 0 FS FD 32 CVT.D.S FD,FS 17 16 0 FS FD 33 CVT.D.W FD,FS 17 20 0 FS FD 33 CVT.D.L FD,FS 17 21 0 FS FD 33 CVT.W.S FD,FS 17 16 0 FS FD 36 CVT.W.D FD,FS 17 17 0 FS FD 36 CVT.L.S FD,FS 17 16 0 FS FD 37 CVT.L.D FD,FS 17 17 0 FS FD 37 CVT.L.D FD,FS 17 17 0 FS FD 37 C.EQ.S FS,FT 17 16 FT FS 0 50 C.EQ.D FS,FT 17 17 FT FS 0 60 <	MOV.PS FD,FS	17	22	0	FS	FD	6
CVT.S.L FD,FS 17 21 0 FS FD 32 CVT.D.S FD,FS 17 16 0 FS FD 33 CVT.D.W FD,FS 17 20 0 FS FD 33 CVT.D.L FD,FS 17 21 0 FS FD 33 CVT.W.S FD,FS 17 16 0 FS FD 36 CVT.W.D FD,FS 17 17 0 FS FD 36 CVT.L.S FD,FS 17 16 0 FS FD 37 CVT.L.D FD,FS 17 17 0 FS FD 37 CVT.L.D FD,FS 17 17 0 FS FD 37 C.EQ.S FS,FT 17 16 FT FS 0 50 C.EQ.D FS,FT 17 16 FT FS 0 60 C.LT.D FS,FT 17 16 FT FS 0 62 <t< td=""><td>CVT.S.D FD,FS</td><td>17</td><td>17</td><td>0</td><td>FS</td><td>FD</td><td>32</td></t<>	CVT.S.D FD,FS	17	17	0	FS	FD	32
CVT.D.S FD,FS 17 16 0 FS FD 33 CVT.D.W FD,FS 17 20 0 FS FD 33 CVT.D.L FD,FS 17 21 0 FS FD 33 CVT.W.S FD,FS 17 16 0 FS FD 36 CVT.W.D FD,FS 17 17 0 FS FD 36 CVT.L.S FD,FS 17 16 0 FS FD 37 CVT.L.D FD,FS 17 17 0 FS FD 37 CVT.L.D FD,FS 17 17 0 FS FD 37 CVT.L.D FD,FS 17 17 FT FS 0 50 C.EQ.S FS,FT 17 17 FT FS 0 50 C.LT.S FS,FT 17 16 FT FS 0 60 C.LE.S FS,FT 17 17 FT FS 0 62 <t< td=""><td>CVT.S.W FD,FS</td><td>17</td><td>20</td><td>0</td><td>FS</td><td>FD</td><td>32</td></t<>	CVT.S.W FD,FS	17	20	0	FS	FD	32
CVT.D.W FD,FS 17 20 0 FS FD 33 CVT.D.L FD,FS 17 21 0 FS FD 33 CVT.W.S FD,FS 17 16 0 FS FD 36 CVT.W.D FD,FS 17 17 0 FS FD 37 CVT.L.S FD,FS 17 16 0 FS FD 37 CVT.L.D FD,FS 17 17 0 FS FD 37 CVT.L.D FD,FS 17 16 FT FS 0 50 C.EQ.S FS,FT 17 16 FT FS 0 50 C.EQ.D FS,FT 17 16 FT FS 0 60 C.LT.D FS,FT 17 17 FT FS 0 60 C.LE.S FS,FT 17 16 FT FS 0 62 C.LE.D FS,FT 17 17 FT FS 0 62	CVT.S.L FD,FS	17	21	0	FS	FD	32
CVT.D.L FD,FS 17 21 0 FS FD 33 CVT.W.S FD,FS 17 16 0 FS FD 36 CVT.W.D FD,FS 17 17 0 FS FD 37 CVT.L.D FD,FS 17 16 0 FS FD 37 CVT.L.D FD,FS 17 17 0 FS FD 37 C.EQ.S FS,FT 17 16 FT FS 0 50 C.EQ.D FS,FT 17 17 FT FS 0 50 C.LT.S FS,FT 17 16 FT FS 0 60 C.LT.D FS,FT 17 17 FT FS 0 60 C.LE.S FS,FT 17 16 FT FS 0 62 C.LE.D FS,FT 17 17 FT FS 0 62 C.LE.D FS,FT 16 16 0 0 0 24 MADD	CVT.D.S FD,FS	17	16	0	FS	FD	33
CVT.W.S FD,FS 17 16 0 FS FD 36 CVT.W.D FD,FS 17 17 0 FS FD 36 CVT.L.S FD,FS 17 16 0 FS FD 37 CVT.L.D FD,FS 17 17 0 FS FD 37 C.EQ.S FS,FT 17 16 FT FS 0 50 C.EQ.D FS,FT 17 17 FT FS 0 60 C.LT.S FS,FT 17 16 FT FS 0 60 C.LE.S FS,FT 17 16 FT FS 0 62 C.LE.D FS,FT 17 17 FT FS 0 62 ERET 16 16 0 0 0 24 MADD.S FD,FR,FS,FT 19 FR FT FS FD 32	CVT.D.W FD,FS	17	20	0	FS	FD	33
CVT.W.D FD,FS 17 17 0 FS FD 36 CVT.L.S FD,FS 17 16 0 FS FD 37 CVT.L.D FD,FS 17 17 0 FS FD 37 C.EQ.S FS,FT 17 16 FT FS 0 50 C.EQ.D FS,FT 17 17 FT FS 0 50 C.LT.S FS,FT 17 16 FT FS 0 60 C.LT.D FS,FT 17 17 FT FS 0 60 C.LE.S FS,FT 17 16 FT FS 0 62 C.LE.D FS,FT 17 17 FT FS 0 62 ERET 16 16 0 0 0 24 MADD.S FD,FR,FS,FT 19 FR FT FS FD 32	CVT.D.L FD,FS	17	21	0	FS	FD	33
CVT.L.S FD,FS 17 16 0 FS FD 37 CVT.L.D FD,FS 17 17 0 FS FD 37 C.EQ.S FS,FT 17 16 FT FS 0 50 C.EQ.D FS,FT 17 17 FT FS 0 50 C.LT.S FS,FT 17 16 FT FS 0 60 C.LT.D FS,FT 17 17 FT FS 0 60 C.LE.S FS,FT 17 16 FT FS 0 62 C.LE.D FS,FT 17 17 FT FS 0 62 ERET 16 16 0 0 0 24 MADD.S FD,FR,FS,FT 19 FR FT FS FD 32	CVT.W.S FD,FS	17	16	0	FS	FD	36
CVT.L.D FD,FS 17 17 0 FS FD 37 C.EQ.S FS,FT 17 16 FT FS 0 50 C.EQ.D FS,FT 17 17 FT FS 0 50 C.LT.S FS,FT 17 16 FT FS 0 60 C.LT.D FS,FT 17 17 FT FS 0 60 C.LE.S FS,FT 17 16 FT FS 0 62 C.LE.D FS,FT 17 17 FT FS 0 62 ERET 16 16 0 0 0 24 MADD.S FD,FR,FS,FT 19 FR FT FS FD 32	CVT.W.D FD,FS	17	17	0	FS	FD	36
C.EQ.S FS,FT 17 16 FT FS 0 50 C.EQ.D FS,FT 17 17 FT FS 0 50 C.LT.S FS,FT 17 16 FT FS 0 60 C.LT.D FS,FT 17 17 FT FS 0 60 C.LE.S FS,FT 17 16 FT FS 0 62 C.LE.D FS,FT 17 17 FT FS 0 62 ERET 16 16 0 0 0 24 MADD.S FD,FR,FS,FT 19 FR FT FS FD 32	CVT.L.S FD,FS	17	16	0	FS	FD	37
C.EQ.D FS,FT 17 17 FT FS 0 50 C.LT.S FS,FT 17 16 FT FS 0 60 C.LT.D FS,FT 17 17 FT FS 0 60 C.LE.S FS,FT 17 16 FT FS 0 62 C.LE.D FS,FT 17 17 FT FS 0 62 ERET 16 16 0 0 0 24 MADD.S FD,FR,FS,FT 19 FR FT FS FD 32	CVT.L.D FD,FS	17	17	0	FS	FD	37
C.LT.S FS,FT 17 16 FT FS 0 60 C.LT.D FS,FT 17 17 FT FS 0 60 C.LE.S FS,FT 17 16 FT FS 0 62 C.LE.D FS,FT 17 17 FT FS 0 62 ERET 16 16 0 0 0 24 MADD.S FD,FR,FS,FT 19 FR FT FS FD 32	C.EQ.S FS,FT	17	16	FT	FS	0	50
C.LT.D FS,FT 17 17 FT FS 0 60 C.LE.S FS,FT 17 16 FT FS 0 62 C.LE.D FS,FT 17 17 FT FS 0 62 ERET 16 16 0 0 0 24 MADD.S FD,FR,FS,FT 19 FR FT FS FD 32	C.EQ.D FS,FT	17	17	FT	FS	0	50
C.LE.S FS,FT 17 16 FT FS 0 62 C.LE.D FS,FT 17 17 FT FS 0 62 ERET 16 16 0 0 0 24 MADD.S FD,FR,FS,FT 19 FR FT FS FD 32	C.LT.S FS,FT	17	16	FT	FS	0	60
C.LE.D FS,FT 17 17 FT FS 0 62 ERET 16 16 0 0 0 24 MADD.S FD,FR,FS,FT 19 FR FT FS FD 32	*	17	17	FT	FS	0	60
C.LE.D FS,FT 17 17 FT FS 0 62 ERET 16 16 0 0 0 24 MADD.S FD,FR,FS,FT 19 FR FT FS FD 32	C.LE.S FS,FT	17	16	FT	FS	0	62
ERET 16 16 0 0 0 24 MADD.S FD,FR,FS,FT 19 FR FT FS FD 32	*	17	17	FT	FS	0	62
, , ,	· ·	16	16	0	0	0	24
	MADD.S FD,FR,FS,FT	19	FR	FT	FS	FD	32
	MADD.D FD,FR,FS,FT	19	FR	FT	FS	FD	33

I-type

BEQ RS,RT,Offset BNE RS,RT,Offset BLEZ RS,Offset BGTZ RS,Offset BLTZ RS,Offset BLTZ RS,Offset BLTZ RS,Offset BLTZ RS,Offset BLTZ RS,Offset BGEZ RS, Offset SLTI RD,RS,IMM SLTIU RD,RS,IMM ANDI RD,RS,IMM ORI RD,RS,IMM XORI RD,RS,IMM 1	Opcode (6) 4 5	RS (5) RS	RT (5)	Immediate (16) Offset
BNE RS,RT,Offset BLEZ RS,Offset BGTZ RS,Offset BLTZ RS,Offset BLTZ RS,Offset BGEZ RS, Offset SLTI RD,RS,IMM SLTIU RD,RS,IMM ANDI RD,RS,IMM ORI RD,RS,IMM XORI RD,RS,IMM 1 XORI RD,RS,IMM 1	5		KT	()ttset
BLEZ RS,Offset BGTZ RS,Offset BLTZ RS,Offset BGEZ RS, Offset SLTI RD,RS,IMM SLTIU RD,RS,IMM ANDI RD,RS,IMM ORI RD,RS,IMM XORI RD,RS,IMM 1 ANDI RD,RS,IMM 1 1 1 1 1 1 1 1 1 1 1 1		RS	~ —	
BGTZ RS,Offset BLTZ RS,Offset BGEZ RS, Offset SLTI RD,RS,IMM SLTIU RD,RS,IMM ANDI RD,RS,IMM ORI RD,RS,IMM XORI RD,RS,IMM 1 1			RT	Offset
BLTZ RS,Offset BGEZ RS, Offset SLTI RD,RS,IMM SLTIU RD,RS,IMM ANDI RD,RS,IMM ORI RD,RS,IMM XORI RD,RS,IMM 1 1	_	RS	0	Offset
BGEZ RS, Offset 1 SLTI RD,RS,IMM 1 SLTIU RD,RS,IMM 1 ANDI RD,RS,IMM 1 ORI RD,RS,IMM 1 XORI RD,RS,IMM 1	7	RS	0	Offset
SLTI RD,RS,IMM SLTIU RD,RS,IMM ANDI RD,RS,IMM ORI RD,RS,IMM XORI RD,RS,IMM 1		RS	0	Offset
SLTIU RD,RS,IMM 1 ANDI RD,RS,IMM 1 ORI RD,RS,IMM 1 XORI RD,RS,IMM 1	1	RS	1	Offset
ANDI RD,RS,IMM I ORI RD,RS,IMM I XORI RD,RS,IMM I	10	RS	RD	IMM
ORI RD,RS,IMM 1 XORI RD,RS,IMM 1	11	RS	RD	IMM
XORI RD,RS,IMM 1	12	RS	RD	IMM
	13	RS	RD	IMM
LUIRDIMM 1	14	RS	RD	IMM
LOI ND, IIVIIVI	15	0	RD	IMM
DADDIU RD,RS,IMM 2	25	RS	RD	IMM
LB RD, Offset(RS)	32	RS	RD	Offset
LH RD, Offset(RS)	33	RS	RD	Offset
LW RD, Offset(RS)	35	RS	RD	Offset
LBU RD, Offset(RS)	36	RS	RD	Offset
LHU RD, Offset(RS)	37	RS	RD	Offset
LWU RD, Offset(RS)	39	RS	RD	Offset
LD RD, Offset(RS) 5	55	RS	RD	Offset
SB RT, Offset(RS)	40	RS	RT	Offset
SH RT, Offset(RS)	41	RS	RT	Offset
SW RT, Offset(RS)	43	RS	RT	Offset
SD RT, Offset(RS)	63	RS	RT	Offset
L.S FD, Offset(RS)	49	RS	FD	Offset
, ,	53	RS	FD	Offset
S.S FT, Offset(RS) 5	57	RS	FT	Offset
S.D FT, Offset(RS)				

Extended I-Type

Instruction	Opcode (6)	Ext Opcode (5)	N (3)	(2)	Immediate (16)
BC1F \$fccN Offset	17	8	N	0	Offset
(N default to 0)					
BC1T \$fccN Offset	17	8	В	1	Offset
(N default to 0)					