

# TriMedia TM32 Instruction Compression Scheme

	24-bit operation part				2-bit part	Extension	Size
name	bit position						
	0-6	7-13	14-20	21-23	24-25	26-34-41	
<b>26-format:</b>							
<binary-unguarded-short>	src1[0:6]	src2[0:6]	dst[0:6]	opcode[0:2]	opcode[3:4]		26
<unary-param7-unguarded-short>	src1[0:6]	param[0:6]	dst[0:6]	opcode[0:2]	opcode[3:4]		26
<binary-unguarded-param7-resultless-short>	src1[0:6]	src2[0:6]	param[0:6]	opcode[0:2]	opcode[3:4]		26
<unary-short>	src1[0:6]	dst[0:6]	guard[0:6]	opcode[0:2]	opcode[3:4]		26
<b>34-format:</b>							
<binary-short> iadd, etc	src1[0:6]	src2[0:6]	guard[0:6]	opcode[0:2]	opcode[3:4]	dst[0:6] 0	34
<unary-param-7-short>	src1[0:6]	param[0:6]	guard[0:6]	opcode[0:2]	opcode[3:4]	dst[0:6] 0	34
<binary-param7-resultless-short>	src1[0:6]	src2[0:6]	guard[0:6]	opcode[0:2]	opcode[3:4]	param[0:6] 0	34
<binary-unguarded>	src1[0:6]	src2[0:6]	dst[0:6]	opcode[0:2]	opcode[3:4]	opcode[5:7]XL011	34
<binary-resultless>	src1[0:6]	src2[0:6]	guard[0:6]	opcode[0:2]	opcode[3:4]	opcode[5:7]XL001	34
<unary-param7-unguarded>	src1[0:6]	param[0:6]	dst[0:6]	opcode[0:2]	opcode[3:4]	opcode[5:7]SL111	34
<unary>	src1[0:6]	dst[0:6]	guard[0:6]	opcode[0:2]	opcode[3:4]	opcode[5:7]XL101	34
<b>42-format:</b>							
<binary-param7-resultless>	src1[0:6]	src2[0:6]	guard[0:6]	opcode[0:2]	opcode[3:4]	opcode[5:7] SXX100 param[0:6]	42
<binary>	src1[0:6]	src2[0:6]	guard[0:6]	opcode[0:2]	opcode[3:4]	opcode[5:7] XL0101 dst[0:6]	42
<unary-param7>	src1[0:6]	param[0:6]	guard[0:6]	opcode[0:2]	opcode[3:4]	opcode[5:7] SL1101 dst[0:6]	42
<zeroary-param32>	param[7:13]	param[0:6]	dst[0:6]	param[14:16]	param[17:18]	param[19:23] XX1 param[24:31]	42
<zeroary-param32-resultless>	param[7:13]	param[0:6]	guard[0:6]	param[14:16]	param[17:18]	param[19:23] 000 param[24:31]	42
<zeroary-param32-resultless>	param[7:13]	param[0:6]	guard[0:6]	param[14:16]	param[17:18]	param[19:23] 100 param[24:31]	42

## Note:

S: signed/unsigned format bit for parametric operations; S=1 if signed, S=0 if unsigned

L: latency format bit; L=0 (if latency=1 and this is not a resultless operation) else L=1

X: undefined value

## Aliases:

zeroary	unary
unary_resultless	unary
binary_resultless_short	binary_resultless
zeroary_param32_short	zeroary_param32
zeroary_param32_resultless_short	zeroary_param32_resultless
zeroary_short	unary
unary_resultless_short	unary
binary_resultless_unguarded	binary_resultless
unary_unguarded	unary
binary_param7_resultless_unguarded	binary_param7_resultless
zeroary_unguarded	unary
unary_resultless_unguarded_short	binary_unguarded_short
zeroary_param32_unguarded_short	zeroary_param32
zeroary_param32_resultless_unguarded_short	zeroary_param32_resultless
zeroary_unguarded_short	unary
unary_resultless_unguarded_short	unary
unary_long	binary
binary_long	binary
binary_resultless_long	binary
unary_param7_long	unary_param7
binary_param7_resultless_long	binary_param7_resultless
zeroary_param32_long	zeroary_param32
zeroary_param32_resultless_long	zeroary_param32_resultless
zeroary_long	binary
unary_resultless_long	binary

\*As described in US Patents #5,787,302 and #5,878,267