

Name:

	Uncond Branch	Cond Branch	MemToReg	MemRead	MemWrite	ALUSrc	ALUOp	RegWrite	Reg2Loc	ALU control bits
add										
sub										
and										
or										
ldur										
stur										
cbz										
b										

(ALUOp is two bits; ALU has four control bits)

Instruction

Opcode

R-type

add	100 0101 1000
sub	110 0101 1000
and	100 0101 0000
or	101 0101 0000

Load/Store

ldur	111 1100 0010
stur	111 1100 0000

Conditional Branch

cbz	101 1010 0xxx
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Unconditional Branch

b	000 101x xxxx
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Note: for this instruction set, bit 28 in the opcode (fourth from left) determines the value of Reg2Loc control.