# Instruction Format

Instructions OP-CODE

| | | | | | |
|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | SWAP |
| 0 | 0 | 0 | 0 | 1 | ADD |
| 0 | 0 | 0 | 1 | 0 | IADD |
| 0 | 0 | 0 | 1 | 1 | SUB |
| 0 | 0 | 1 | 0 | 0 | AND |
| 0 | 0 | 1 | 0 | 1 | OR |
| 0 | 0 | 1 | 1 | 0 | SHL |
| 0 | 0 | 1 | 1 | 1 | SHR |
| 0 | 1 | 0 | 0 | 0 | NOP |
| 0 | 1 | 0 | 0 | 1 | NOT |
| 0 | 1 | 0 | 1 | 0 | INC |
| 0 | 1 | 0 | 1 | 1 | DEC |
| 0 | 1 | 1 | 0 | 0 | OUT |
| 0 | 1 | 1 | 0 | 1 | IN |
| 1 | 0 | 0 | 0 | 0 | JZ |
| 1 | 0 | 0 | 0 | 1 | JMP |
| 1 | 0 | 0 | 1 | 0 | CALL |
| 1 | 0 | 1 | 0 | 0 | RET |
| 1 | 0 | 1 | 0 | 1 | RTI |
| 1 | 0 | 1 | 1 | 0 | RESET |
| 1 | 0 | 1 | 1 | 1 | INTERRUPT |
| 1 | 1 | 0 | 0 | 0 | PUSH |
| 1 | 1 | 0 | 0 | 1 | POP |

# Instruction Format

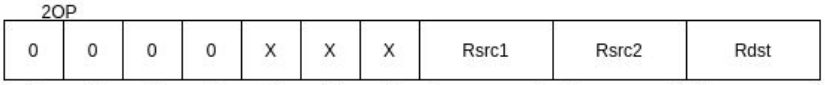
| | | | | | |
|---|---|---|---|---|---|
| 1 | 1 | 1 | 0 | 0 | LDM |
| 1 | 1 | 1 | 0 | 1 | LDD |
| 1 | 1 | 1 | 1 | 0 | STD |

## Regesters codes

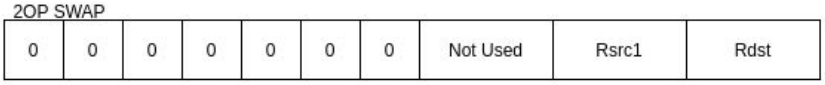
| | | | |
|---|---|---|---|
| 0 | 0 | 0 | R0 |
| 0 | 0 | 1 | R1 |
| 0 | 1 | 0 | R2 |
| 0 | 1 | 1 | R3 |
| 1 | 0 | 0 | R4 |
| 1 | 0 | 1 | R5 |
| 1 | 1 | 0 | R6 |
| 1 | 1 | 1 | R7 |

# Instruction Format

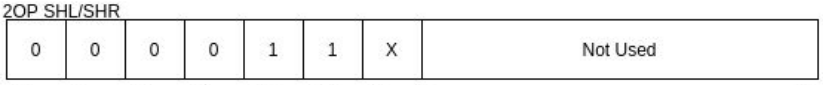
2OP




2OP SWAP




2OP SHL/SHR




2OP SHL/SHR immediate val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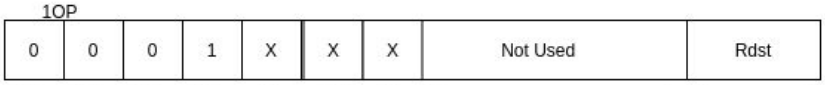
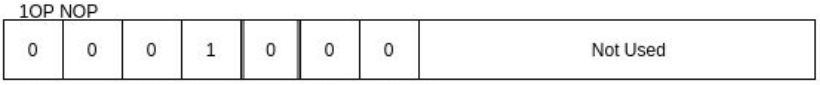
1OP




1OP NOP

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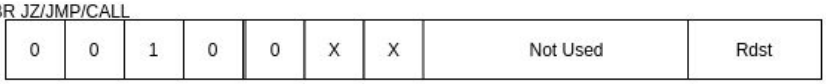
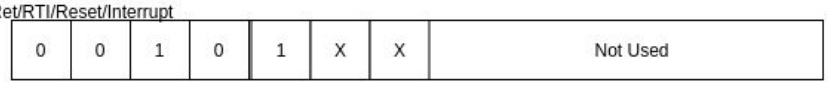
BR JZ/JMP/CALL




BR Ret/RTI/Reset/Interrupt

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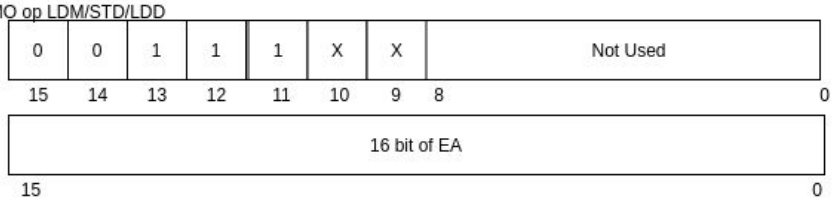
MEMO op LDM/STD/LDD




MEMO op PUSH/POP