AUX

ALU

|  |  |  |
| --- | --- | --- |
| **fff** | **2op** | **1op** |
| 000 | move | not |
| 001 | add | neg |
| 010 | addc | dec |
| 011 | sub | inc |
| 100 | and | shr |
| 101 | or | shla |
| 110 | xor | shra |
| 111 | cmp | swan |

branches

|  |  |  |
| --- | --- | --- |
| **xxx** | **n=0** | **n=1** |
| 000 | beq | bne |
| 001 | bcs | bcc |
| 010 | bmi | bpl |
| 011 | bvs | bvc |
| 100 | bhi | bls |
| 101 | bge | blt |
| 110 | bgt | ble |
| 111 | br | nop |

|  |  |
| --- | --- |
| 110100**dd** | ldi\* |
| 11010100 | halt |
| 11010101 | wait |
| 11010110 | jsr\* |
| 11010111 | rts |
| 11011000 | ioi |
| 11011001 | rti |
| 11011010 | crc |
| 11011011 | osix\* |
| 110111xx | **unused(\*)** |
| 1110xxxn | branches\* |
| 1111**ssdd** | ldc |

\* - immediate operand

|  |  |
| --- | --- |
| 0fff**ssdd**  ALU | ALU-2op |
| 100fff**dd** | ALU-1op |
| 1010**ssdd**  Memоry | st |
| 1011**ssdd** | ld |
| 110000**dd** | push |
| 110001**dd** | pop |
| 110010**dd**  Stack | ldsa\* |
| 11001100 | addsp\* |
| 11001101 | setsp\* |
| 11001110 | pushall |
| 11001111 | popall |