

MOVN

Move wide with NOT moves the inverse of an optionally-shifted 16-bit immediate value to a register.

This instruction is used by the alias [MOV \(inverted wide immediate\)](#).

31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
sf		0 0		1 0 0		1 0 1		hw		imm16																		Rd			
opc																															

32-bit (sf == 0 && hw == 0x)

```
MOVN <Wd>, #<imm>{, LSL #<shift>}
```

64-bit (sf == 1)

```
MOVN <Xd>, #<imm>{, LSL #<shift>}
```

```
if sf == '0' && hw<1> == '1' then UNDEFINED;
integer d = UInt(Rd);
constant integer datasize = 32 << UInt(sf);
constant integer pos = UInt(hw:'0000');
```

Assembler Symbols

- <Wd> Is the 32-bit name of the general-purpose destination register, encoded in the "Rd" field.
- <Xd> Is the 64-bit name of the general-purpose destination register, encoded in the "Rd" field.
- <imm> Is the 16-bit unsigned immediate, in the range 0 to 65535, encoded in the "imm16" field.
- <shift> For the 32-bit variant: is the amount by which to shift the immediate left, either 0 (the default) or 16, encoded in the "hw" field as <shift>/16.
- For the 64-bit variant: is the amount by which to shift the immediate left, either 0 (the default), 16, 32 or 48, encoded in the "hw" field as <shift>/16.

Alias Conditions

Alias	Of variant	Is preferred when
MOV (inverted wide immediate)	64-bit	! (IsZero (imm16) && hw != '00')
MOV (inverted wide immediate)	32-bit	! (IsZero (imm16) && hw != '00') && ! IsOnes (imm16)

Operation

```
bits(datasize) result;
result = Zeros(datasize);
result<pos+15:pos> = imm16;
result = NOT(result);
X[d, datasize] = result;
```

Operational information

If PSTATE.DIT is 1:

- The execution time of this instruction is independent of:
 - The values of the data supplied in any of its registers.
 - The values of the NZCV flags.
- The response of this instruction to asynchronous exceptions does not vary based on:
 - The values of the data supplied in any of its registers.
 - The values of the NZCV flags.

Base Instructions	SIMD&FP Instructions	SVE Instructions	SME Instructions	Index by Encoding	Sh Pseud
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