

## CSINV

Conditional Select Invert returns, in the destination register, the value of the first source register if the condition is TRUE, and otherwise returns the bitwise inversion value of the second source register.

This instruction is used by the aliases [CINV](#), and [CSETM](#).

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	1	0	1	1	0	1	0	1	0	0	Rm				cond				0	0	Rn				Rd						
op											o2																				

### 32-bit (sf == 0)

CSINV <Wd>, <Wn>, <Wm>, <cond>

### 64-bit (sf == 1)

CSINV <Xd>, <Xn>, <Xm>, <cond>

```
integer d = UInt(Rd);
integer n = UInt(Rn);
integer m = UInt(Rm);
constant integer datasize = 32 << UInt(sf);
```

## Assembler Symbols

<Wd>	Is the 32-bit name of the general-purpose destination register, encoded in the "Rd" field.
<Wn>	Is the 32-bit name of the first general-purpose source register, encoded in the "Rn" field.
<Wm>	Is the 32-bit name of the second general-purpose source register, encoded in the "Rm" field.
<Xd>	Is the 64-bit name of the general-purpose destination register, encoded in the "Rd" field.
<Xn>	Is the 64-bit name of the first general-purpose source register, encoded in the "Rn" field.
<Xm>	Is the 64-bit name of the second general-purpose source register, encoded in the "Rm" field.
<cond>	Is one of the standard conditions, encoded in the "cond" field in the standard way.

## Alias Conditions

Alias	Is preferred when
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<a href="#">CINV</a>	Rm != '11111' && cond != '111x' && Rn != '11111' && Rn == Rm
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Alias	Is preferred when
<a href="#">CSETM</a>	Rm == '11111' && cond != '111x' && Rn == '11111'

Operation

```

bits(datasize) result;
if ConditionHolds(cond) then
    result = X[n, datasize];
else
    result = X[m, datasize];
    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.

<a href="#">Base Instructions</a>	<a href="#">SIMD&amp;FP Instructions</a>	<a href="#">SVE Instructions</a>	<a href="#">SME Instructions</a>	<a href="#">Index by Encoding</a>	<a href="#">Sh Pseu</a>
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