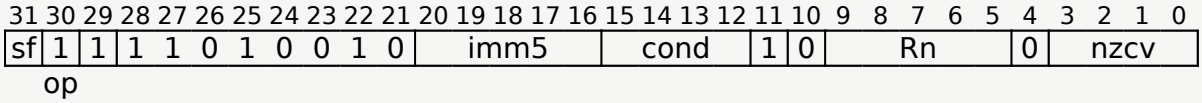
## CCMP (immediate)

Conditional Compare (immediate) sets the value of the condition flags to the result of the comparison of a register value and an immediate value if the condition is TRUE, and an immediate value otherwise.




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

```
CCMP <Wn>, #<imm>, #<nzcv>, <cond>
```

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

```
CCMP <Xn>, #<imm>, #<nzcv>, <cond>
```

```
integer n = UInt(Rn);
constant integer datasize = 32 << UInt(sf);
bits(4) flags = nzcv;
bits(datasize) imm = ZeroExtend(imm5, datasize);
```

### Assembler Symbols

| | |
|---|---|
| <Wn> | Is the 32-bit name of the first general-purpose source register, encoded in the "Rn" field. |
| <Xn> | Is the 64-bit name of the first general-purpose source register, encoded in the "Rn" field. |
| <imm> | Is a five bit unsigned (positive) immediate encoded in the "imm5" field. |
| <nzcv> | Is the flag bit specifier, an immediate in the range 0 to 15, giving the alternative state for the 4-bit NZCV condition flags, encoded in the "nzcv" field. |
| <cond> | Is one of the standard conditions, encoded in the "cond" field in the standard way. |

### Operation

```
if ConditionHolds(cond) then
    bits(datasize) operand1 = X[n, datasize];
    bits(datasize) operand2;
    operand2 = NOT(imm);
    (-, flags) = AddWithCarry(operand1, operand2, '1');
PSTATE.<N,Z,C,V> = flags;
```

**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.

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