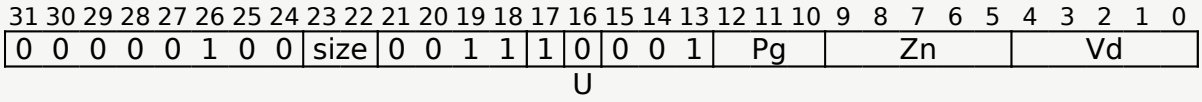
SMINQV

Signed minimum reduction of quadword vector segments

Signed minimum of the same element numbers from each 128-bit source vector segment, placing each result into the corresponding element number of the 128-bit SIMD&FP destination register. Inactive elements in the source vector are treated as the maximum signed integer for the element size.

SVE2
(FEAT_SVE2p1)



SMINQV <Vd>.<T>, <Pg>, <Zn>.<Tb>

```
if !HaveSVE2p1() && !HaveSME2p1() then UNDEFINED;
constant integer esize = 8 << UInt(size);
integer g = UInt(Pg);
integer n = UInt(Zn);
integer d = UInt(Vd);
boolean unsigned = FALSE;
```

Assembler Symbols

<Vd> Is the name of the destination SIMD&FP register, encoded in the "Vd" field.

<T> Is an arrangement specifier, encoded in “size”:

size	<T>
00	16B
01	8H
10	4S
11	2D

<Pg> Is the name of the governing scalable predicate register P0-P7, encoded in the "Pg" field.

<Zn> Is the name of the source scalable vector register, encoded in the "Zn" field.

<Tb>

Is the size specifier, encoded in “size”:

size	<Tb>
00	B
01	H
10	S
11	D

Operation

```
CheckSVEEnabled();
constant integer VL = CurrentVL;
constant integer PL = VL DIV 8;
constant integer segments = VL DIV 128;
constant integer elempersegment = 128 DIV esize;
bits(PL) mask = P[g, PL];
bits(VL) operand = if AnyActiveElement(mask, esize) then Z[n, VL] else
bits(128) result = Zeros(128);
bits(128) stmp = Zeros(128);

integer dtmp;

for e = 0 to elempersegment-1
    dtmp = if unsigned then (2^esize - 1) else (2^(esize-1) - 1);
    for s = 0 to segments-1
        if ActivePredicateElement(mask, s * elempersegment + e, esize)
            stmp = Elem[operand, s, 128];
            dtmp = Min(dtmp, SInt(Elem[stmp, e, esize]));
    Elem[result, e, esize] = dtmp<esize-1:0>;

V[d, 128] = 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 operand registers when its governing predicate register contains the same value for each execution.
  - 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 operand registers when its governing predicate register contains the same value for each execution.
  - The values of the NZCV flags.

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