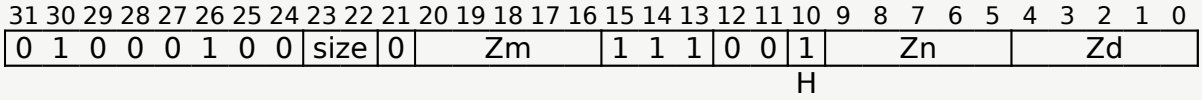
ZIPQ2

Interleave elements from high halves of each pair of quadword vector segments

Interleave alternating elements from high halves of the corresponding 128-bit vector segments of the first and second source vectors and place in elements of the corresponding destination vector segment. This instruction is unpredicated.

SVE2
(FEAT_SVE2p1)




```
ZIPQ2 <Zd>.<T>, <Zn>.<T>, <Zm>.<T>
```

```
if !HaveSVE2p1() && !HaveSME2p1() then UNDEFINED;
constant integer esize = 8 << UInt(size);
integer n = UInt(Zn);
integer m = UInt(Zm);
integer d = UInt(Zd);
integer part = 1;
```

Assembler Symbols

<Zd> Is the name of the destination scalable vector register, encoded in the "Zd" field.

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

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

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

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

Operation

```
CheckSVEEnabled();
constant integer VL = CurrentVL;
```

```
constant integer PL = VL DIV 8;
constant integer segments = VL DIV 128;
constant integer elements = 128 DIV esize;
constant integer pairs = elements DIV 2;
bits(VL) operand1 = Z[n, VL];
bits(VL) operand2 = Z[m, VL];
bits(VL) result;

for s = 0 to segments-1
    integer base = s * elements + part * pairs;
    for p = 0 to pairs-1
        Elem[result, s * elements + 2 * p + 0, esize] = Elem[operand1,
        Elem[result, s * elements + 2 * p + 1, esize] = Elem[operand2,

Z[d, VL] = 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.

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