

PMUL

Polynomial multiply vectors (unpredicated)

Polynomial multiply over [0, 1] all elements of the second source vector to corresponding elements of the first source vector and place the results in the corresponding elements of the destination vector. This instruction is unpredicated.

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
0	0	0	0	0	1	0	0	0	0	1			Zm		0	1	1	0	0	1			Zn					Zd			

size<1>size<0>

PMUL <Zd>.B, <Zn>.B, <Zm>.B

```
if !HaveSVE2() && !HaveSME() then UNDEFINED;
constant integer esize = 8;
integer n = UInt(Zn);
integer m = UInt(Zm);
integer d = UInt(Zd);
```

Assembler Symbols

- <Zd> Is the name of the destination scalable vector register, encoded in the "Zd" field.
- <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 elements = VL DIV esize;
bits(VL) operand1 = Z[n, VL];
bits(VL) operand2 = Z[m, VL];
bits(VL) result;

for e = 0 to elements-1
    bits(esize) element1 = Elem[operand1, e, esize];
    bits(esize) element2 = Elem[operand2, e, esize];
    Elem[result, e, esize] = PolynomialMult(element1, element2)<esize-1>

Z[d, VL] = result;
```

Operational information

If FEAT_SVE2 is implemented or FEAT_SME is implemented, then 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
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[Sh](#)
[Pseu](#)

Internal version only: isa v33.64, AdvSIMD v29.12, pseudocode no_diffs_2023_09_RC2, sve v2023-06_rel ; Build timestamp: 2023-09-18T17:56

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