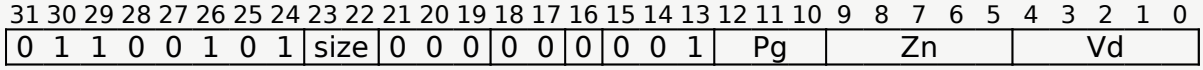
FADDV

Floating-point add recursive reduction to scalar

Floating-point add horizontally over all lanes of a vector using a recursive pairwise reduction, and place the result in the SIMD&FP scalar destination register. Inactive elements in the source vector are treated as +0.0.



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	1	1	0	0	1	0	1	size		0	0	0	0	0	0	0	0	1	Pg			Zn					Vd				

FADDV <V><d>, <Pg>, <Zn>.<T>

```
if !HaveSVE() && !HaveSME() then UNDEFINED;
if size == '00' then UNDEFINED;
constant integer esize = 8 << UInt(size);
integer g = UInt(Pg);
integer n = UInt(Zn);
integer d = UInt(Vd);
```

Assembler Symbols

<V>

Is a width specifier, encoded in “size”:

size	<V>
00	RESERVED
01	H
10	S
11	D

<d>

Is the number [0-31] of the destination SIMD&FP register, encoded in the "Vd" field.

<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.

<T>

Is the size specifier, encoded in “size”:

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

Operation

```
CheckSVEEnabled();
constant integer VL = CurrentVL;
constant integer PL = VL DIV 8;
bits(PL) mask = P[g, PL];
bits(VL) operand = if AnyActiveElement(mask, esize) then Z[n, VL] else
bits(esize) identity = FPZero('0', esize);

V[d, esize] = ReducePredicated(ReduceOp_FADD, operand, mask, identity);
```

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