

| Instruction category | ARM Advanced SIMD | MIPS SIMD | Power Vector Facility |
|---------------------------------------|-------------------|------------------|-----------------------|
| Add/subtract | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D; Q |
| Saturating add/sub | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D; Q |
| Absolute value of difference | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D; Q |
| Adjacent add & subtract (pairwise) | 16B, 8H, 4W | 16B, 8H, 4W | 16B, 8H, 4W; 2 D |
| Average | | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D; Q |
| Dot product add, dot product subtract | 16B, 8H, 4W | 16B, 8H, 4W | 16B, 8H, 4W; 2 D |
| Divide: signed, unsigned | 16B, 8H, 4W | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D; Q |
| Multiply: signed, unsigned | 16B, 8H, 4W | 16B, 8H, 4W | 16B, 8H, 4W; 2 D |
| Multiply add, multiply subtract | 16B, 8H, 4W | 16B, 8H, 4W | 16B, 8H, 4W; 2 D |
| Maximum, signed & unsigned | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D; Q |
| Minimum, signed & unsigned | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D; Q |
| Modulo, signed & unsigned | | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D; Q |
| Compare equal | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D; Q |
| Compare <, <=, signed, unsigned | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D | 16B, 8H, 4W; 2 D; Q |

FIGURE E.25 Summary of arithmetic SIMD instructions. B stands for byte (8 bits), H for half word (16 bits), and W for word (32 bits), D for double word (64 bits), and Q for quad word (128 bits). Thus, 8B means an operation on 8 bytes in a single instruction. Note that some instructions—such as adjacent add/subtract, or multiply—produce results that are twice the width of the inputs (e.g. multiply on 16 bytes produces 8 halfword results). Dot product is a multiply and accumulate. The SPARC VIS instructions are aimed primarily at graphics and are structured accordingly.