

Data transfer	Arithmetic	Compare
MOV{A/U}{SS/PS/SD/PD} xmm, mem/xmm	ADD{SS/PS/SD/PD} xmm, mem/xmm	CMP{SS/PS/SD/PD}
	SUB{SS/PS/SD/PD} xmm, mem/xmm	
MOV {H/L} {PS/PD} xmm, mem/xmm	MUL{SS/PS/SD/PD} xmm, mem/xmm	
	DIV{SS/PS/SD/PD} xmm, mem/xmm	
	SQRT{SS/PS/SD/PD} mem/xmm	
	MAX {SS/PS/SD/PD} mem/xmm	
	MIN{SS/PS/SD/PD} mem/xmm	

FIGURE 3.20 The SSE/SSE2 floating-point instructions of the x86. xmm means one operand is a 128-bit SSE2 register, and mem/xmm means the other operand is either in memory or it is an SSE2 register. We use the curly brackets {} to show optional variations of the basic operations: {SS} stands for *Scalar Single* precision floating point, or one 32-bit operand in a 128-bit register; {PS} stands for *Packed Single* precision floating point, or four 32-bit operands in a 128-bit register; {SD} stands for *Scalar Double* precision floating point, or one 64-bit operand in a 128-bit register; {PD} stands for *Packed Double* precision floating point, or two 64-bit operands in a 128-bit register; {A} means the 128-bit operand is aligned in memory; {U} means the 128-bit operand is unaligned in memory; {H} means move the high half of the 128-bit operand; and {L} means move the low half of the 128-bit operand.