

NASM - The Netwide Assembler

version 2.15.05

Appendix B: Instruction List

B.1 Introduction

The following sections show the instructions which NASM currently supports. For each instruction, there is a separate entry for each supported addressing mode. The third column shows the processor type in which the instruction was introduced and, when appropriate, one or more usage flags.

B.1.1 Special instructions (pseudo-ops)

DB		
DW		
DD		
DQ		
DT		
DO		
DY		
DZ		
RESB	imm	8086
RESW	imm	8086
RESD	imm	8086
RESQ	imm	8086
REST	imm	8086
RESO	imm	8086
RESY	imm	8086
RESZ	imm	8086
INCBIN		

B.1.2 Conventional instructions

AAA		8086, NO LONG
AAD		8086, NO LONG
AAD	imm	8086, NO LONG
AAM		8086, NO LONG
AAM	imm	8086, NO LONG
AAS		8086, NO LONG
ADC	mem, reg8	8086, LOCK
ADC	reg8, reg8	8086
ADC	mem, reg16	8086, LOCK
ADC	reg16, reg16	8086
ADC	mem, reg32	386, LOCK
ADC	reg32, reg32	386
ADC	mem, reg64	X86_64, LONG, LOCK
ADC	reg64, reg64	X86_64, LONG
ADC	reg8, mem	8086
ADC	reg8, reg8	8086
ADC	reg16, mem	8086
ADC	reg16, reg16	8086
ADC	reg32, mem	386

ADC	reg32,reg32	386
ADC	reg64,mem	X86_64, LONG
ADC	reg64,reg64	X86_64, LONG
ADC	rm16,imm8	8086, LOCK
ADC	rm32,imm8	386, LOCK
ADC	rm64,imm8	X86_64, LONG, LOCK
ADC	reg_al,imm	8086
ADC	reg_ax,sbytedword	8086, ND
ADC	reg_ax,imm	8086
ADC	reg_eax,sbytedword	386, ND
ADC	reg_eax,imm	386
ADC	reg_rax,sbytedword	X86_64, LONG, ND
ADC	reg_rax,imm	X86_64, LONG
ADC	rm8,imm	8086, LOCK
ADC	rm16,sbytedword	8086, LOCK, ND
ADC	rm16,imm	8086, LOCK
ADC	rm32,sbytedword	386, LOCK, ND
ADC	rm32,imm	386, LOCK
ADC	rm64,sbytedword	X86_64, LONG, LOCK, ND
ADC	rm64,imm	X86_64, LONG, LOCK
ADC	mem,imm8	8086, LOCK, ND
ADC	mem,sbytedword16	8086, LOCK, ND
ADC	mem,imm16	8086, LOCK
ADC	mem,sbytedword32	386, LOCK, ND
ADC	mem,imm32	386, LOCK
ADC	rm8,imm	8086, LOCK, ND, NOLONG
ADD	mem,reg8	8086, LOCK
ADD	reg8,reg8	8086
ADD	mem,reg16	8086, LOCK
ADD	reg16,reg16	8086
ADD	mem,reg32	386, LOCK
ADD	reg32,reg32	386
ADD	mem,reg64	X86_64, LONG, LOCK
ADD	reg64,reg64	X86_64, LONG
ADD	reg8,mem	8086
ADD	reg8,reg8	8086
ADD	reg16,mem	8086
ADD	reg16,reg16	8086
ADD	reg32,mem	386
ADD	reg32,reg32	386
ADD	reg64,mem	X86_64, LONG
ADD	reg64,reg64	X86_64, LONG
ADD	rm16,imm8	8086, LOCK
ADD	rm32,imm8	386, LOCK
ADD	rm64,imm8	X86_64, LONG, LOCK
ADD	reg_al,imm	8086
ADD	reg_ax,sbytedword	8086, ND
ADD	reg_ax,imm	8086
ADD	reg_eax,sbytedword	386, ND
ADD	reg_eax,imm	386
ADD	reg_rax,sbytedword	X86_64, LONG, ND
ADD	reg_rax,imm	X86_64, LONG
ADD	rm8,imm	8086, LOCK
ADD	rm16,sbytedword	8086, LOCK, ND
ADD	rm16,imm	8086, LOCK
ADD	rm32,sbytedword	386, LOCK, ND
ADD	rm32,imm	386, LOCK
ADD	rm64,sbytedword	X86_64, LONG, LOCK, ND
ADD	rm64,imm	X86_64, LONG, LOCK
ADD	mem,imm8	8086, LOCK

ADD	mem,sbytedword16	8086, LOCK, ND
ADD	mem,imm16	8086, LOCK
ADD	mem,sbytedword32	386, LOCK, ND
ADD	mem,imm32	386, LOCK
ADD	rm8,imm	8086, LOCK, ND, NOLONG
AND	mem,reg8	8086, LOCK
AND	reg8,reg8	8086
AND	mem,reg16	8086, LOCK
AND	reg16,reg16	8086
AND	mem,reg32	386, LOCK
AND	reg32,reg32	386
AND	mem,reg64	X86_64, LONG, LOCK
AND	reg64,reg64	X86_64, LONG
AND	reg8,mem	8086
AND	reg8,reg8	8086
AND	reg16,mem	8086
AND	reg16,reg16	8086
AND	reg32,mem	386
AND	reg32,reg32	386
AND	reg64,mem	X86_64, LONG
AND	reg64,reg64	X86_64, LONG
AND	rm16,imm8	8086, LOCK
AND	rm32,imm8	386, LOCK
AND	rm64,imm8	X86_64, LONG, LOCK
AND	reg_al,imm	8086
AND	reg_ax,sbytedword	8086, ND
AND	reg_ax,imm	8086
AND	reg_eax,sbytedword	386, ND
AND	reg_eax,imm	386
AND	reg_rax,sbytedword	X86_64, LONG, ND
AND	reg_rax,imm	X86_64, LONG
AND	rm8,imm	8086, LOCK
AND	rm16,sbytedword	8086, LOCK, ND
AND	rm16,imm	8086, LOCK
AND	rm32,sbytedword	386, LOCK, ND
AND	rm32,imm	386, LOCK
AND	rm64,sbytedword	X86_64, LONG, LOCK, ND
AND	rm64,imm	X86_64, LONG, LOCK
AND	mem,imm8	8086, LOCK
AND	mem,sbytedword16	8086, LOCK, ND
AND	mem,imm16	8086, LOCK
AND	mem,sbytedword32	386, LOCK, ND
AND	mem,imm32	386, LOCK
AND	rm8,imm	8086, LOCK, ND, NOLONG
ARPL	mem,reg16	286, PROT, NOLONG
ARPL	reg16,reg16	286, PROT, NOLONG
BB0_RESET		PENT,CYRIX,ND,OBSOLETE
BB1_RESET		PENT,CYRIX,ND,OBSOLETE
BOUND	reg16,mem	186, NOLONG
BOUND	reg32,mem	386, NOLONG
BSF	reg16,mem	386
BSF	reg16,reg16	386
BSF	reg32,mem	386
BSF	reg32,reg32	386
BSF	reg64,mem	X86_64, LONG
BSF	reg64,reg64	X86_64, LONG
BSR	reg16,mem	386
BSR	reg16,reg16	386
BSR	reg32,mem	386
BSR	reg32,reg32	386

BSR	reg64,mem	X86_64, LONG
BSR	reg64,reg64	X86_64, LONG
BSWAP	reg32	486
BSWAP	reg64	X86_64, LONG
BT	mem,reg16	386
BT	reg16,reg16	386
BT	mem,reg32	386
BT	reg32,reg32	386
BT	mem,reg64	X86_64, LONG
BT	reg64,reg64	X86_64, LONG
BT	rm16,imm8	386
BT	rm32,imm8	386
BT	rm64,imm8	X86_64, LONG
BTC	mem,reg16	386, LOCK
BTC	reg16,reg16	386
BTC	mem,reg32	386, LOCK
BTC	reg32,reg32	386
BTC	mem,reg64	X86_64, LONG, LOCK
BTC	reg64,reg64	X86_64, LONG
BTC	rm16,imm8	386, LOCK
BTC	rm32,imm8	386, LOCK
BTC	rm64,imm8	X86_64, LONG, LOCK
BTR	mem,reg16	386, LOCK
BTR	reg16,reg16	386
BTR	mem,reg32	386, LOCK
BTR	reg32,reg32	386
BTR	mem,reg64	X86_64, LONG, LOCK
BTR	reg64,reg64	X86_64, LONG
BTR	rm16,imm8	386, LOCK
BTR	rm32,imm8	386, LOCK
BTR	rm64,imm8	X86_64, LONG, LOCK
BTS	mem,reg16	386, LOCK
BTS	reg16,reg16	386
BTS	mem,reg32	386, LOCK
BTS	reg32,reg32	386
BTS	mem,reg64	X86_64, LONG, LOCK
BTS	reg64,reg64	X86_64, LONG
BTS	rm16,imm8	386, LOCK
BTS	rm32,imm8	386, LOCK
BTS	rm64,imm8	X86_64, LONG, LOCK
CALL	imm	8086, BND
CALL	imm near	8086, ND, BND
CALL	imm far	8086, ND, NOLONG
CALL	imm16	8086, NOLONG, BND
CALL	imm16 near	8086, ND, NOLONG, BND
CALL	imm16 far	8086, ND, NOLONG
CALL	imm32	386, NOLONG, BND
CALL	imm32 near	386, ND, NOLONG, BND
CALL	imm32 far	386, ND, NOLONG
CALL	imm64	X86_64, LONG, BND
CALL	imm64 near	X86_64, LONG, ND, BND
CALL	imm:imm	8086, NOLONG
CALL	imm16:imm	8086, NOLONG
CALL	imm:imm16	8086, NOLONG
CALL	imm32:imm	386, NOLONG
CALL	imm:imm32	386, NOLONG
CALL	mem far	8086, NOLONG
CALL	mem far	X86_64, LONG
CALL	mem16 far	8086
CALL	mem32 far	386

CALL	mem64 far	X86_64, LONG
CALL	mem near	8086, ND, BND
CALL	rm16 near	8086, NO LONG, ND, BND
CALL	rm32 near	386, NO LONG, ND, BND
CALL	rm64 near	X86_64, LONG, ND, BND
CALL	mem	8086, BND
CALL	rm16	8086, NO LONG, BND
CALL	rm32	386, NO LONG, BND
CALL	rm64	X86_64, LONG, BND
CBW		8086
CDQ		386
CDQE		X86_64, LONG
CLC		8086
CLD		8086
CLI		8086
CLTS		286, PRIV
CMC		8086
CMP	mem, reg8	8086
CMP	reg8, reg8	8086
CMP	mem, reg16	8086
CMP	reg16, reg16	8086
CMP	mem, reg32	386
CMP	reg32, reg32	386
CMP	mem, reg64	X86_64, LONG
CMP	reg64, reg64	X86_64, LONG
CMP	reg8, mem	8086
CMP	reg8, reg8	8086
CMP	reg16, mem	8086
CMP	reg16, reg16	8086
CMP	reg32, mem	386
CMP	reg32, reg32	386
CMP	reg64, mem	X86_64, LONG
CMP	reg64, reg64	X86_64, LONG
CMP	rm16, imm8	8086
CMP	rm32, imm8	386
CMP	rm64, imm8	X86_64, LONG
CMP	reg_al, imm	8086
CMP	reg_ax, sbytedword	8086, ND
CMP	reg_ax, imm	8086
CMP	reg_eax, sbytedword	386, ND
CMP	reg_eax, imm	386
CMP	reg_rax, sbytedword	X86_64, LONG, ND
CMP	reg_rax, imm	X86_64, LONG
CMP	rm8, imm	8086
CMP	rm16, sbytedword	8086, ND
CMP	rm16, imm	8086
CMP	rm32, sbytedword	386, ND
CMP	rm32, imm	386
CMP	rm64, sbytedword	X86_64, LONG, ND
CMP	rm64, imm	X86_64, LONG
CMP	mem, imm8	8086
CMP	mem, sbytedword16	8086, ND
CMP	mem, imm16	8086
CMP	mem, sbytedword32	386, ND
CMP	mem, imm32	386
CMP	rm8, imm	8086, ND, NO LONG
CMPSB		8086
CMPSD		386
CMPSQ		X86_64, LONG
CMPSW		8086

CMPXCHG	mem,reg8	PENT,LOCK
CMPXCHG	reg8,reg8	PENT
CMPXCHG	mem,reg16	PENT,LOCK
CMPXCHG	reg16,reg16	PENT
CMPXCHG	mem,reg32	PENT,LOCK
CMPXCHG	reg32,reg32	PENT
CMPXCHG	mem,reg64	X86_64, LONG, LOCK
CMPXCHG	reg64,reg64	X86_64, LONG
CMPXCHG486	mem,reg8	486, UNDOC, ND, LOCK, OBSOLETE
CMPXCHG486	reg8,reg8	486, UNDOC, ND, OBSOLETE
CMPXCHG486	mem,reg16	486, UNDOC, ND, LOCK, OBSOLETE
CMPXCHG486	reg16,reg16	486, UNDOC, ND, OBSOLETE
CMPXCHG486	mem,reg32	486, UNDOC, ND, LOCK, OBSOLETE
CMPXCHG486	reg32,reg32	486, UNDOC, ND, OBSOLETE
CMPXCHG8B	mem64	PENT, LOCK
CMPXCHG16B	mem128	X86_64, LONG, LOCK
CPUID		PENT
CPU_READ		PENT, CYRIX
CPU_WRITE		PENT, CYRIX
CQO		X86_64, LONG
CWD		8086
CWDE		386
DAA		8086, NOLONG
DAS		8086, NOLONG
DEC	reg16	8086, NOLONG
DEC	reg32	386, NOLONG
DEC	rm8	8086, LOCK
DEC	rm16	8086, LOCK
DEC	rm32	386, LOCK
DEC	rm64	X86_64, LONG, LOCK
DIV	rm8	8086
DIV	rm16	8086
DIV	rm32	386
DIV	rm64	X86_64, LONG
DMINT		P6, CYRIX
EMMS		PENT, MMX
ENTER	imm,imm	186
EQU	imm	8086
EQU	imm:imm	8086
F2XM1		8086, FPU
FABS		8086, FPU
FADD	mem32	8086, FPU
FADD	mem64	8086, FPU
FADD	fpureg to	8086, FPU
FADD	fpureg	8086, FPU
FADD	fpureg, fpu0	8086, FPU
FADD	fpu0, fpureg	8086, FPU
FADD		8086, FPU, ND
FADDP	fpureg	8086, FPU
FADDP	fpureg, fpu0	8086, FPU
FADDP		8086, FPU, ND
FBLD	mem80	8086, FPU
FBLD	mem	8086, FPU
FBSTP	mem80	8086, FPU
FBSTP	mem	8086, FPU
FCHS		8086, FPU
FCLEX		8086, FPU
FCMOVB	fpureg	P6, FPU
FCMOVB	fpu0, fpureg	P6, FPU
FCMOVB		P6, FPU, ND

FCMOVBE	fpureg	P6, FPU
FCMOVBE	fpu0, fpureg	P6, FPU
FCMOVBE		P6, FPU, ND
FCMOVE	fpureg	P6, FPU
FCMOVE	fpu0, fpureg	P6, FPU
FCMOVE		P6, FPU, ND
FCMOVNB	fpureg	P6, FPU
FCMOVNB	fpu0, fpureg	P6, FPU
FCMOVNB		P6, FPU, ND
FCMOVNBE	fpureg	P6, FPU
FCMOVNBE	fpu0, fpureg	P6, FPU
FCMOVNBE		P6, FPU, ND
FCMOVNE	fpureg	P6, FPU
FCMOVNE	fpu0, fpureg	P6, FPU
FCMOVNE		P6, FPU, ND
FCMOVNU	fpureg	P6, FPU
FCMOVNU	fpu0, fpureg	P6, FPU
FCMOVNU		P6, FPU, ND
FCMOVU	fpureg	P6, FPU
FCMOVU	fpu0, fpureg	P6, FPU
FCMOVU		P6, FPU, ND
FCOM	mem32	8086, FPU
FCOM	mem64	8086, FPU
FCOM	fpureg	8086, FPU
FCOM	fpu0, fpureg	8086, FPU
FCOM		8086, FPU, ND
FCOMI	fpureg	P6, FPU
FCOMI	fpu0, fpureg	P6, FPU
FCOMI		P6, FPU, ND
FCOMIP	fpureg	P6, FPU
FCOMIP	fpu0, fpureg	P6, FPU
FCOMIP		P6, FPU, ND
FCOMP	mem32	8086, FPU
FCOMP	mem64	8086, FPU
FCOMP	fpureg	8086, FPU
FCOMP	fpu0, fpureg	8086, FPU
FCOMP		8086, FPU, ND
FCOMPP		8086, FPU
FCOS		386, FPU
FDECSTP		8086, FPU
FDISI		8086, FPU
FDIV	mem32	8086, FPU
FDIV	mem64	8086, FPU
FDIV	fpureg to	8086, FPU
FDIV	fpureg	8086, FPU
FDIV	fpureg, fpu0	8086, FPU
FDIV	fpu0, fpureg	8086, FPU
FDIV		8086, FPU, ND
FDIVP	fpureg	8086, FPU
FDIVP	fpureg, fpu0	8086, FPU
FDIVP		8086, FPU, ND
FDIVR	mem32	8086, FPU
FDIVR	mem64	8086, FPU
FDIVR	fpureg to	8086, FPU
FDIVR	fpureg, fpu0	8086, FPU
FDIVR	fpureg	8086, FPU
FDIVR	fpu0, fpureg	8086, FPU
FDIVR		8086, FPU, ND
FDIVRP	fpureg	8086, FPU
FDIVRP	fpureg, fpu0	8086, FPU

FDIVRP		8086, FPU, ND
FEMMS		PENT, 3DNOW
FENI		8086, FPU
FFREE	fpureg	8086, FPU
FFREE		8086, FPU
FFREEP	fpureg	286, FPU, UNDOC
FFREEP		286, FPU, UNDOC
FIADD	mem32	8086, FPU
FIADD	mem16	8086, FPU
FICOM	mem32	8086, FPU
FICOM	mem16	8086, FPU
FICOMP	mem32	8086, FPU
FICOMP	mem16	8086, FPU
FIDIV	mem32	8086, FPU
FIDIV	mem16	8086, FPU
FIDIVR	mem32	8086, FPU
FIDIVR	mem16	8086, FPU
FILD	mem32	8086, FPU
FILD	mem16	8086, FPU
FILD	mem64	8086, FPU
FIMUL	mem32	8086, FPU
FIMUL	mem16	8086, FPU
FINCSTP		8086, FPU
FINIT		8086, FPU
FIST	mem32	8086, FPU
FIST	mem16	8086, FPU
FISTP	mem32	8086, FPU
FISTP	mem16	8086, FPU
FISTP	mem64	8086, FPU
FISTTP	mem16	PRESCOTT, FPU
FISTTP	mem32	PRESCOTT, FPU
FISTTP	mem64	PRESCOTT, FPU
FISUB	mem32	8086, FPU
FISUB	mem16	8086, FPU
FISUBR	mem32	8086, FPU
FISUBR	mem16	8086, FPU
FLD	mem32	8086, FPU
FLD	mem64	8086, FPU
FLD	mem80	8086, FPU
FLD	fpureg	8086, FPU
FLD		8086, FPU, ND
FLD1		8086, FPU
FLDCW	mem	8086, FPU, SW
FLDENV	mem	8086, FPU
FLDL2E		8086, FPU
FLDL2T		8086, FPU
FLDLG2		8086, FPU
FLDLN2		8086, FPU
FLDPI		8086, FPU
FLDZ		8086, FPU
FMUL	mem32	8086, FPU
FMUL	mem64	8086, FPU
FMUL	fpureg to	8086, FPU
FMUL	fpureg, fpu0	8086, FPU
FMUL	fpureg	8086, FPU
FMUL	fpu0, fpureg	8086, FPU
FMUL		8086, FPU, ND
FMULP	fpureg	8086, FPU
FMULP	fpureg, fpu0	8086, FPU
FMULP		8086, FPU, ND

FNCLEX		8086, FPU
FNDISI		8086, FPU
FNENI		8086, FPU
FNINIT		8086, FPU
FNOP		8086, FPU
FNSAVE	mem	8086, FPU
FNSTCW	mem	8086, FPU, SW
FNSTENV	mem	8086, FPU
FNSTSW	mem	8086, FPU, SW
FNSTSW	reg_ax	286, FPU
FPATAN		8086, FPU
FPREM		8086, FPU
FPREM1		386, FPU
FPTAN		8086, FPU
FRNDINT		8086, FPU
FRSTOR	mem	8086, FPU
FSAVE	mem	8086, FPU
FSCALE		8086, FPU
FSETPM		286, FPU
FSIN		386, FPU
FSINCOS		386, FPU
FSQRT		8086, FPU
FST	mem32	8086, FPU
FST	mem64	8086, FPU
FST	fpureg	8086, FPU
FST		8086, FPU, ND
FSTCW	mem	8086, FPU, SW
FSTENV	mem	8086, FPU
FSTP	mem32	8086, FPU
FSTP	mem64	8086, FPU
FSTP	mem80	8086, FPU
FSTP	fpureg	8086, FPU
FSTP		8086, FPU, ND
FSTSW	mem	8086, FPU, SW
FSTSW	reg_ax	286, FPU
FSUB	mem32	8086, FPU
FSUB	mem64	8086, FPU
FSUB	fpureg to	8086, FPU
FSUB	fpureg, fpu0	8086, FPU
FSUB	fpureg	8086, FPU
FSUB	fpu0, fpureg	8086, FPU
FSUB		8086, FPU, ND
FSUBP	fpureg	8086, FPU
FSUBP	fpureg, fpu0	8086, FPU
FSUBP		8086, FPU, ND
FSUBR	mem32	8086, FPU
FSUBR	mem64	8086, FPU
FSUBR	fpureg to	8086, FPU
FSUBR	fpureg, fpu0	8086, FPU
FSUBR	fpureg	8086, FPU
FSUBR	fpu0, fpureg	8086, FPU
FSUBR		8086, FPU, ND
FSUBRP	fpureg	8086, FPU
FSUBRP	fpureg, fpu0	8086, FPU
FSUBRP		8086, FPU, ND
FTST		8086, FPU
FUCOM	fpureg	386, FPU
FUCOM	fpu0, fpureg	386, FPU
FUCOM		386, FPU, ND
FUCOMI	fpureg	P6, FPU

FUCOMI	fpu0, fpureg	P6, FPU
FUCOMI		P6, FPU, ND
FUCOMIP	fpureg	P6, FPU
FUCOMIP	fpu0, fpureg	P6, FPU
FUCOMIP		P6, FPU, ND
FUCOMP	fpureg	386, FPU
FUCOMP	fpu0, fpureg	386, FPU
FUCOMP		386, FPU, ND
FUCOMPP		386, FPU
FXAM		8086, FPU
FXCH	fpureg	8086, FPU
FXCH	fpureg, fpu0	8086, FPU
FXCH	fpu0, fpureg	8086, FPU
FXCH		8086, FPU, ND
FXTRACT		8086, FPU
FYL2X		8086, FPU
FYL2XP1		8086, FPU
HLT		8086, PRIV
IBTS	mem, reg16	386, SW, UNDOC, ND, OBSOLETE
IBTS	reg16, reg16	386, UNDOC, ND, OBSOLETE
IBTS	mem, reg32	386, SD, UNDOC, ND, OBSOLETE
IBTS	reg32, reg32	386, UNDOC, ND, OBSOLETE
ICEBP		386, ND
IDIV	rm8	8086
IDIV	rm16	8086
IDIV	rm32	386
IDIV	rm64	X86_64, LONG
IMUL	rm8	8086
IMUL	rm16	8086
IMUL	rm32	386
IMUL	rm64	X86_64, LONG
IMUL	reg16, mem	386
IMUL	reg16, reg16	386
IMUL	reg32, mem	386
IMUL	reg32, reg32	386
IMUL	reg64, mem	X86_64, LONG
IMUL	reg64, reg64	X86_64, LONG
IMUL	reg16, mem, imm8	186
IMUL	reg16, mem, sbytedword	186, ND
IMUL	reg16, mem, imm16	186
IMUL	reg16, mem, imm	186, ND
IMUL	reg16, reg16, imm8	186
IMUL	reg16, reg16, sbytedword	186, ND
IMUL	reg16, reg16, imm16	186
IMUL	reg16, reg16, imm	186, ND
IMUL	reg32, mem, imm8	386
IMUL	reg32, mem, sbytedword	386, ND
IMUL	reg32, mem, imm32	386
IMUL	reg32, mem, imm	386, ND
IMUL	reg32, reg32, imm8	386
IMUL	reg32, reg32, sbytedword	386, ND
IMUL	reg32, reg32, imm32	386
IMUL	reg32, reg32, imm	386, ND
IMUL	reg64, mem, imm8	X86_64, LONG
IMUL	reg64, mem, sbytedword	X86_64, LONG, ND
IMUL	reg64, mem, imm32	X86_64, LONG
IMUL	reg64, mem, imm	X86_64, LONG, ND
IMUL	reg64, reg64, imm8	X86_64, LONG
IMUL	reg64, reg64, sbytedword	X86_64, LONG, ND
IMUL	reg64, reg64, imm32	X86_64, LONG

IMUL	reg64,reg64,imm	X86_64, LONG,ND
IMUL	reg16,imm8	186
IMUL	reg16,sbytedword	186,ND
IMUL	reg16,imm16	186
IMUL	reg16,imm	186,ND
IMUL	reg32,imm8	386
IMUL	reg32,sbytedword	386,ND
IMUL	reg32,imm32	386
IMUL	reg32,imm	386,ND
IMUL	reg64,imm8	X86_64, LONG
IMUL	reg64,sbytedword	X86_64, LONG,ND
IMUL	reg64,imm32	X86_64, LONG
IMUL	reg64,imm	X86_64, LONG,ND
IN	reg_al,imm	8086
IN	reg_ax,imm	8086
IN	reg_eax,imm	386
IN	reg_al,reg_dx	8086
IN	reg_ax,reg_dx	8086
IN	reg_eax,reg_dx	386
INC	reg16	8086,NOLONG
INC	reg32	386,NOLONG
INC	rm8	8086, LOCK
INC	rm16	8086, LOCK
INC	rm32	386, LOCK
INC	rm64	X86_64, LONG, LOCK
INSB		186
INSD		386
INSW		186
INT	imm	8086
INT01		386,ND
INT1		386
INT03		8086,ND
INT3		8086
INTO		8086,NOLONG
INVD		486,PRIV
INVPCID	reg32,mem128	INVPCID,PRIV,NOLONG
INVPCID	reg64,mem128	INVPCID,PRIV, LONG
INVLPG	mem	486,PRIV
INVLPGA	reg_ax,reg_ecx	X86_64,AMD,NOLONG
INVLPGA	reg_eax,reg_ecx	X86_64,AMD
INVLPGA	reg_rax,reg_ecx	X86_64, LONG,AMD
INVLPGA		X86_64,AMD
IRET		8086
IRETD		386
IRETQ		X86_64, LONG
IRETW		8086
JCXZ	imm	8086,NOLONG
JECXZ	imm	386
JRCXZ	imm	X86_64, LONG
JMP	imm short	8086
JMP	imm	8086,ND
JMP	imm	8086,BND
JMP	imm near	8086,ND,BND
JMP	imm far	8086,ND,NOLONG
JMP	imm16	8086,NOLONG,BND
JMP	imm16 near	8086,ND,NOLONG,BND
JMP	imm16 far	8086,ND,NOLONG
JMP	imm32	386,NOLONG,BND
JMP	imm32 near	386,ND,NOLONG,BND
JMP	imm32 far	386,ND,NOLONG

JMP	imm64	X86_64, LONG, BND
JMP	imm64 near	X86_64, LONG, ND, BND
JMP	imm:imm	8086, NO LONG
JMP	imm16:imm	8086, NO LONG
JMP	imm:imm16	8086, NO LONG
JMP	imm32:imm	386, NO LONG
JMP	imm:imm32	386, NO LONG
JMP	mem far	8086, NO LONG
JMP	mem far	X86_64, LONG
JMP	mem16 far	8086
JMP	mem32 far	386
JMP	mem64 far	X86_64, LONG
JMP	mem near	8086, ND, BND
JMP	rm16 near	8086, NO LONG, ND, BND
JMP	rm32 near	386, NO LONG, ND, BND
JMP	rm64 near	X86_64, LONG, ND, BND
JMP	mem	8086, BND
JMP	rm16	8086, NO LONG, BND
JMP	rm32	386, NO LONG, BND
JMP	rm64	X86_64, LONG, BND
JMPE	imm	IA64
JMPE	imm16	IA64
JMPE	imm32	IA64
JMPE	rm16	IA64
JMPE	rm32	IA64
LAHF		8086
LAR	reg16,mem	286, PROT, SW
LAR	reg16,reg16	286, PROT
LAR	reg16,reg32	386, PROT
LAR	reg16,reg64	X86_64, LONG, PROT, ND
LAR	reg32,mem	386, PROT, SW
LAR	reg32,reg16	386, PROT
LAR	reg32,reg32	386, PROT
LAR	reg32,reg64	X86_64, LONG, PROT, ND
LAR	reg64,mem	X86_64, LONG, PROT, SW
LAR	reg64,reg16	X86_64, LONG, PROT
LAR	reg64,reg32	X86_64, LONG, PROT
LAR	reg64,reg64	X86_64, LONG, PROT
LDS	reg16,mem	8086, NO LONG
LDS	reg32,mem	386, NO LONG
LEA	reg16,mem	8086, ANY SIZE
LEA	reg32,mem	386, ANY SIZE
LEA	reg64,mem	X86_64, LONG, ANY SIZE
LEA	reg16,imm	8086, ND, ANY SIZE
LEA	reg32,imm	386, ND, ANY SIZE
LEA	reg64,imm	X86_64, LONG, ND, ANY SIZE
LEAVE		186
LES	reg16,mem	8086, NO LONG
LES	reg32,mem	386, NO LONG
LFENCE		X86_64, LONG, AMD
LFS	reg16,mem	386
LFS	reg32,mem	386
LFS	reg64,mem	X86_64, LONG
LGDT	mem	286, PRIV
LGS	reg16,mem	386
LGS	reg32,mem	386
LGS	reg64,mem	X86_64, LONG
LIDT	mem	286, PRIV
LLDT	mem	286, PROT, PRIV
LLDT	mem16	286, PROT, PRIV

LLDT	reg16	286,PROT,PRIV
LMSW	mem	286,PRIV
LMSW	mem16	286,PRIV
LMSW	reg16	286,PRIV
LOADALL		386,UNDOC,ND,OBSOLETE
LOADALL286		286,UNDOC,ND,OBSOLETE
LDSB		8086
LODS		386
LODSQ		X86_64, LONG
LODSW		8086
LOOP	imm	8086
LOOP	imm,reg_cx	8086,NOLONG
LOOP	imm,reg_ecx	386
LOOP	imm,reg_rcx	X86_64, LONG
LOOPE	imm	8086
LOOPE	imm,reg_cx	8086,NOLONG
LOOPE	imm,reg_ecx	386
LOOPE	imm,reg_rcx	X86_64, LONG
LOOPNE	imm	8086
LOOPNE	imm,reg_cx	8086,NOLONG
LOOPNE	imm,reg_ecx	386
LOOPNE	imm,reg_rcx	X86_64, LONG
LOOPNZ	imm	8086
LOOPNZ	imm,reg_cx	8086,NOLONG
LOOPNZ	imm,reg_ecx	386
LOOPNZ	imm,reg_rcx	X86_64, LONG
LOOPZ	imm	8086
LOOPZ	imm,reg_cx	8086,NOLONG
LOOPZ	imm,reg_ecx	386
LOOPZ	imm,reg_rcx	X86_64, LONG
LSL	reg16,mem	286,PROT,SW
LSL	reg16,reg16	286,PROT
LSL	reg16,reg32	386,PROT
LSL	reg16,reg64	X86_64, LONG, PROT, ND
LSL	reg32,mem	386,PROT,SW
LSL	reg32,reg16	386,PROT
LSL	reg32,reg32	386,PROT
LSL	reg32,reg64	X86_64, LONG, PROT, ND
LSL	reg64,mem	X86_64, LONG, PROT, SW
LSL	reg64,reg16	X86_64, LONG, PROT
LSL	reg64,reg32	X86_64, LONG, PROT
LSL	reg64,reg64	X86_64, LONG, PROT
LSS	reg16,mem	386
LSS	reg32,mem	386
LSS	reg64,mem	X86_64, LONG
LTR	mem	286,PROT,PRIV
LTR	mem16	286,PROT,PRIV
LTR	reg16	286,PROT,PRIV
MFENCE		X86_64, LONG, AMD
MONITOR		PRESCOTT
MONITOR	reg_eax,reg_ecx,reg_edx	PRESCOTT,NOLONG,ND
MONITOR	reg_rax,reg_ecx,reg_edx	X86_64, LONG, ND
MONITORX		AMD
MONITORX	reg_rax,reg_ecx,reg_edx	X86_64, LONG, AMD, ND
MONITORX	reg_eax,reg_ecx,reg_edx	AMD,ND
MONITORX	reg_ax,reg_ecx,reg_edx	AMD,ND
MOV	mem,reg_sreg	8086,SW
MOV	reg16,reg_sreg	8086
MOV	reg32,reg_sreg	386
MOV	reg64,reg_sreg	X86_64, LONG, OPT, ND

MOV	rm64,reg_sreg	X86_64, LONG
MOV	reg_sreg,mem	8086, SW
MOV	reg_sreg,reg16	8086, OPT, ND
MOV	reg_sreg,reg32	386, OPT, ND
MOV	reg_sreg,reg64	X86_64, LONG, OPT, ND
MOV	reg_sreg,reg16	8086
MOV	reg_sreg,reg32	386
MOV	reg_sreg,rm64	X86_64, LONG
MOV	reg_al,mem_offs	8086
MOV	reg_ax,mem_offs	8086
MOV	reg_eax,mem_offs	386
MOV	reg_rax,mem_offs	X86_64, LONG
MOV	mem_offs,reg_al	8086, NOHLE
MOV	mem_offs,reg_ax	8086, NOHLE
MOV	mem_offs,reg_eax	386, NOHLE
MOV	mem_offs,reg_rax	X86_64, LONG, NOHLE
MOV	reg32,reg_creg	386, PRIV, NOLONG
MOV	reg64,reg_creg	X86_64, LONG, PRIV
MOV	reg_creg,reg32	386, PRIV, NOLONG
MOV	reg_creg,reg64	X86_64, LONG, PRIV
MOV	reg32,reg_dreg	386, PRIV, NOLONG
MOV	reg64,reg_dreg	X86_64, LONG, PRIV
MOV	reg_dreg,reg32	386, PRIV, NOLONG
MOV	reg_dreg,reg64	X86_64, LONG, PRIV
MOV	reg32,reg_treg	386, NOLONG, ND
MOV	reg_treg,reg32	386, NOLONG, ND
MOV	mem,reg8	8086
MOV	reg8,reg8	8086
MOV	mem,reg16	8086
MOV	reg16,reg16	8086
MOV	mem,reg32	386
MOV	reg32,reg32	386
MOV	mem,reg64	X86_64, LONG
MOV	reg64,reg64	X86_64, LONG
MOV	reg8,mem	8086
MOV	reg8,reg8	8086
MOV	reg16,mem	8086
MOV	reg16,reg16	8086
MOV	reg32,mem	386
MOV	reg32,reg32	386
MOV	reg64,mem	X86_64, LONG
MOV	reg64,reg64	X86_64, LONG
MOV	reg8,imm	8086
MOV	reg16,imm	8086
MOV	reg32,imm	386
MOV	reg64,udword	X86_64, LONG, OPT, ND
MOV	reg64,sdword	X86_64, LONG, OPT, ND
MOV	reg64,imm	X86_64, LONG
MOV	rm8,imm	8086
MOV	rm16,imm	8086
MOV	rm32,imm	386
MOV	rm64,imm	X86_64, LONG
MOV	rm64,imm32	X86_64, LONG
MOV	mem,imm8	8086
MOV	mem,imm16	8086
MOV	mem,imm32	386
MOVD	mmxreg,rm32	PENT, MMX, SD
MOVD	rm32,mmxreg	PENT, MMX, SD
MOVD	mmxreg,rm64	X86_64, LONG, MMX, SX, ND
MOVD	rm64,mmxreg	X86_64, LONG, MMX, SX, ND

MOVQ	mmxreg,mmxrm	PENT,MMX
MOVQ	mmxrm,mmxreg	PENT,MMX
MOVQ	mmxreg,rm64	X86_64, LONG,MMX
MOVQ	rm64,mmxreg	X86_64, LONG,MMX
MOVSB		8086
MOVSD		386
MOVSQ		X86_64, LONG
MOVSW		8086
MOVSX	reg16,mem	386
MOVSX	reg16,reg8	386
MOVSX	reg32,rm8	386
MOVSX	reg32,rm16	386
MOVSX	reg64,rm8	X86_64, LONG
MOVSX	reg64,rm16	X86_64, LONG
MOVSXD	reg64,rm32	X86_64, LONG
MOVSX	reg64,rm32	X86_64, LONG,ND
MOVZX	reg16,mem	386
MOVZX	reg16,reg8	386
MOVZX	reg32,rm8	386
MOVZX	reg32,rm16	386
MOVZX	reg64,rm8	X86_64, LONG
MOVZX	reg64,rm16	X86_64, LONG
MUL	rm8	8086
MUL	rm16	8086
MUL	rm32	386
MUL	rm64	X86_64, LONG
MWAIT		PRESCOTT
MWAIT	reg_eax,reg_ecx	PRESCOTT,ND
MWAITX		AMD
MWAITX	reg_eax,reg_ecx	AMD,ND
NEG	rm8	8086, LOCK
NEG	rm16	8086, LOCK
NEG	rm32	386, LOCK
NEG	rm64	X86_64, LONG, LOCK
NOP		8086
NOP	rm16	P6
NOP	rm32	P6
NOP	rm64	X86_64, LONG
NOT	rm8	8086, LOCK
NOT	rm16	8086, LOCK
NOT	rm32	386, LOCK
NOT	rm64	X86_64, LONG, LOCK
OR	mem,reg8	8086, LOCK
OR	reg8,reg8	8086
OR	mem,reg16	8086, LOCK
OR	reg16,reg16	8086
OR	mem,reg32	386, LOCK
OR	reg32,reg32	386
OR	mem,reg64	X86_64, LONG, LOCK
OR	reg64,reg64	X86_64, LONG
OR	reg8,mem	8086
OR	reg8,reg8	8086
OR	reg16,mem	8086
OR	reg16,reg16	8086
OR	reg32,mem	386
OR	reg32,reg32	386
OR	reg64,mem	X86_64, LONG
OR	reg64,reg64	X86_64, LONG
OR	rm16,imm8	8086, LOCK
OR	rm32,imm8	386, LOCK

11/28/2021, 3:33 PM

PFCMIN	mmxreg,mmxrm	PENT,3DNOW
PFCMUL	mmxreg,mmxrm	PENT,3DNOW
PFCRC	mmxreg,mmxrm	PENT,3DNOW
PFCRCIT1	mmxreg,mmxrm	PENT,3DNOW
PFCRCIT2	mmxreg,mmxrm	PENT,3DNOW
PFRSQIT1	mmxreg,mmxrm	PENT,3DNOW
PFRSQRT	mmxreg,mmxrm	PENT,3DNOW
PFSUB	mmxreg,mmxrm	PENT,3DNOW
PFSUBR	mmxreg,mmxrm	PENT,3DNOW
PI2FD	mmxreg,mmxrm	PENT,3DNOW
PMACHRIW	mmxreg,mem	PENT,MMX,CYRIX
PMADDWD	mmxreg,mmxrm	PENT,MMX
PMAGW	mmxreg,mmxrm	PENT,MMX,CYRIX
PMULHRIW	mmxreg,mmxrm	PENT,MMX,CYRIX
PMULHRWA	mmxreg,mmxrm	PENT,3DNOW
PMULHRWC	mmxreg,mmxrm	PENT,MMX,CYRIX
PMULHW	mmxreg,mmxrm	PENT,MMX
PMULLW	mmxreg,mmxrm	PENT,MMX
PMVGEZB	mmxreg,mem	PENT,MMX,CYRIX
PMVLZB	mmxreg,mem	PENT,MMX,CYRIX
PMVNZB	mmxreg,mem	PENT,MMX,CYRIX
PMVZB	mmxreg,mem	PENT,MMX,CYRIX
POP	reg16	8086
POP	reg32	386,NOLONG
POP	reg64	X86_64, LONG
POP	rm16	8086
POP	rm32	386,NOLONG
POP	rm64	X86_64, LONG
POP	reg_es	8086,NOLONG
POP	reg_cs	8086,UNDOC,ND,OBSOLETE
POP	reg_ss	8086,NOLONG
POP	reg_ds	8086,NOLONG
POP	reg_fs	386
POP	reg_gs	386
POPA		186,NOLONG
POPAD		386,NOLONG
POPAW		186,NOLONG
POPF		8086
POPFD		386,NOLONG
POPfq		X86_64, LONG
POPFW		8086
POR	mmxreg,mmxrm	PENT,MMX
PREFETCH	mem	PENT,3DNOW
PREFETCHW	mem	PENT,3DNOW
PSLLD	mmxreg,mmxrm	PENT,MMX
PSLLD	mmxreg,imm	PENT,MMX
PSLLQ	mmxreg,mmxrm	PENT,MMX
PSLLQ	mmxreg,imm	PENT,MMX
PSLLW	mmxreg,mmxrm	PENT,MMX
PSLLW	mmxreg,imm	PENT,MMX
PSRAD	mmxreg,mmxrm	PENT,MMX
PSRAD	mmxreg,imm	PENT,MMX
PSRAW	mmxreg,mmxrm	PENT,MMX
PSRAW	mmxreg,imm	PENT,MMX
PSRLD	mmxreg,mmxrm	PENT,MMX
PSRLD	mmxreg,imm	PENT,MMX
PSRLQ	mmxreg,mmxrm	PENT,MMX
PSRLQ	mmxreg,imm	PENT,MMX
PSRLW	mmxreg,mmxrm	PENT,MMX
PSRLW	mmxreg,imm	PENT,MMX

PSUBB	mmxreg,mmxrm	PENT,MMX
PSUBD	mmxreg,mmxrm	PENT,MMX
PSUBSB	mmxreg,mmxrm	PENT,MMX
PSUBSIW	mmxreg,mmxrm	PENT,MMX,CYRIX
PSUBSW	mmxreg,mmxrm	PENT,MMX
PSUBUSB	mmxreg,mmxrm	PENT,MMX
PSUBUSW	mmxreg,mmxrm	PENT,MMX
PSUBW	mmxreg,mmxrm	PENT,MMX
PUNPCKHBW	mmxreg,mmxrm	PENT,MMX
PUNPCKHDQ	mmxreg,mmxrm	PENT,MMX
PUNPCKHWD	mmxreg,mmxrm	PENT,MMX
PUNPCKLBW	mmxreg,mmxrm	PENT,MMX
PUNPCKLDQ	mmxreg,mmxrm	PENT,MMX
PUNPCKLWD	mmxreg,mmxrm	PENT,MMX
PUSH	reg16	8086
PUSH	reg32	386,NOLONG
PUSH	reg64	X86_64, LONG
PUSH	rm16	8086
PUSH	rm32	386,NOLONG
PUSH	rm64	X86_64, LONG
PUSH	reg_es	8086,NOLONG
PUSH	reg_cs	8086,NOLONG
PUSH	reg_ss	8086,NOLONG
PUSH	reg_ds	8086,NOLONG
PUSH	reg_fs	386
PUSH	reg_gs	386
PUSH	imm8	186
PUSH	sbyteword16	186,AR0,SIZE,ND
PUSH	imm16	186,AR0,SIZE
PUSH	sbytedword32	386,NOLONG,AR0,SIZE,ND
PUSH	imm32	386,NOLONG,AR0,SIZE
PUSH	sbytedword32	386,NOLONG,SD,ND
PUSH	imm32	386,NOLONG,SD
PUSH	sbytedword64	X86_64, LONG,AR0,SIZE,ND
PUSH	imm64	X86_64, LONG,AR0,SIZE
PUSH	sbytedword32	X86_64, LONG,AR0,SIZE,ND
PUSH	imm32	X86_64, LONG,AR0,SIZE
PUSHA		186,NOLONG
PUSHAD		386,NOLONG
PUSHAW		186,NOLONG
PUSHF		8086
PUSHFD		386,NOLONG
PUSHFQ		X86_64, LONG
PUSHFW		8086
PXOR	mmxreg,mmxrm	PENT,MMX
RCL	rm8,unity	8086
RCL	rm8,reg_cl	8086
RCL	rm8,imm8	186
RCL	rm16,unity	8086
RCL	rm16,reg_cl	8086
RCL	rm16,imm8	186
RCL	rm32,unity	386
RCL	rm32,reg_cl	386
RCL	rm32,imm8	386
RCL	rm64,unity	X86_64, LONG
RCL	rm64,reg_cl	X86_64, LONG
RCL	rm64,imm8	X86_64, LONG
RCR	rm8,unity	8086
RCR	rm8,reg_cl	8086
RCR	rm8,imm8	186

RCR	rm16,unity	8086
RCR	rm16,reg_cl	8086
RCR	rm16,imm8	186
RCR	rm32,unity	386
RCR	rm32,reg_cl	386
RCR	rm32,imm8	386
RCR	rm64,unity	X86_64, LONG
RCR	rm64,reg_cl	X86_64, LONG
RCR	rm64,imm8	X86_64, LONG
RDSHR	rm32	P6, CYRIX, SMM
RDMSR		PENT, PRIV
RDPMC		P6
RDTSC		PENT
RDTSCP		X86_64
RET		8086, BND
RET	imm	8086, SW, BND
RETF		8086
RETF	imm	8086, SW
RETN		8086, BND
RETN	imm	8086, SW, BND
RETW		8086, BND
RETW	imm	8086, SW, BND
RETFW		8086
RETFW	imm	8086, SW
RETNW		8086, BND
RETNW	imm	8086, SW, BND
RETD		8086, BND, NOLONG
RETD	imm	8086, SW, BND, NOLONG
RETFD		8086
RETFD	imm	8086, SW
RETND		8086, BND, NOLONG
RETND	imm	8086, SW, BND, NOLONG
RETQ		X86_64, LONG, BND
RETQ	imm	X86_64, LONG, SW, BND
RETFQ		X86_64, LONG
RETFQ	imm	X86_64, LONG, SW
RETNQ		X86_64, LONG, BND
RETNQ	imm	X86_64, LONG, SW, BND
ROL	rm8,unity	8086
ROL	rm8,reg_cl	8086
ROL	rm8,imm8	186
ROL	rm16,unity	8086
ROL	rm16,reg_cl	8086
ROL	rm16,imm8	186
ROL	rm32,unity	386
ROL	rm32,reg_cl	386
ROL	rm32,imm8	386
ROL	rm64,unity	X86_64, LONG
ROL	rm64,reg_cl	X86_64, LONG
ROL	rm64,imm8	X86_64, LONG
ROR	rm8,unity	8086
ROR	rm8,reg_cl	8086
ROR	rm8,imm8	186
ROR	rm16,unity	8086
ROR	rm16,reg_cl	8086
ROR	rm16,imm8	186
ROR	rm32,unity	386
ROR	rm32,reg_cl	386
ROR	rm32,imm8	386
ROR	rm64,unity	X86_64, LONG

ROR	rm64,reg_cl	X86_64, LONG
ROR	rm64,imm8	X86_64, LONG
RDM		P6,CYRIX,ND
RSDC	reg_sreg,mem80	486,CYRIX,SMM
RSLDT	mem80	486,CYRIX,SMM
RSM		PENT,SMM
RSTS	mem80	486,CYRIX,SMM
SAHF		8086
SAL	rm8,unity	8086,ND
SAL	rm8,reg_cl	8086,ND
SAL	rm8,imm8	186,ND
SAL	rm16,unity	8086,ND
SAL	rm16,reg_cl	8086,ND
SAL	rm16,imm8	186,ND
SAL	rm32,unity	386,ND
SAL	rm32,reg_cl	386,ND
SAL	rm32,imm8	386,ND
SAL	rm64,unity	X86_64, LONG,ND
SAL	rm64,reg_cl	X86_64, LONG,ND
SAL	rm64,imm8	X86_64, LONG,ND
SALC		8086,UNDOC
SAR	rm8,unity	8086
SAR	rm8,reg_cl	8086
SAR	rm8,imm8	186
SAR	rm16,unity	8086
SAR	rm16,reg_cl	8086
SAR	rm16,imm8	186
SAR	rm32,unity	386
SAR	rm32,reg_cl	386
SAR	rm32,imm8	386
SAR	rm64,unity	X86_64, LONG
SAR	rm64,reg_cl	X86_64, LONG
SAR	rm64,imm8	X86_64, LONG
SBB	mem,reg8	8086,LOCK
SBB	reg8,reg8	8086
SBB	mem,reg16	8086,LOCK
SBB	reg16,reg16	8086
SBB	mem,reg32	386,LOCK
SBB	reg32,reg32	386
SBB	mem,reg64	X86_64, LONG,LOCK
SBB	reg64,reg64	X86_64, LONG
SBB	reg8,mem	8086
SBB	reg8,reg8	8086
SBB	reg16,mem	8086
SBB	reg16,reg16	8086
SBB	reg32,mem	386
SBB	reg32,reg32	386
SBB	reg64,mem	X86_64, LONG
SBB	reg64,reg64	X86_64, LONG
SBB	rm16,imm8	8086,LOCK
SBB	rm32,imm8	386,LOCK
SBB	rm64,imm8	X86_64, LONG,LOCK
SBB	reg_al,imm	8086
SBB	reg_ax,sbytedword	8086,ND
SBB	reg_ax,imm	8086
SBB	reg_eax,sbytedword	386,ND
SBB	reg_eax,imm	386
SBB	reg_rax,sbytedword	X86_64, LONG,ND
SBB	reg_rax,imm	X86_64, LONG
SBB	rm8,imm	8086,LOCK

SBB	rm16,sbyteword	8086, LOCK, ND
SBB	rm16,imm	8086, LOCK
SBB	rm32,sbytedword	386, LOCK, ND
SBB	rm32,imm	386, LOCK
SBB	rm64,sbytedword	X86_64, LONG, LOCK, ND
SBB	rm64,imm	X86_64, LONG, LOCK
SBB	mem,imm8	8086, LOCK
SBB	mem,sbyteword16	8086, LOCK, ND
SBB	mem,imm16	8086, LOCK
SBB	mem,sbytedword32	386, LOCK, ND
SBB	mem,imm32	386, LOCK
SBB	rm8,imm	8086, LOCK, ND, NOLONG
SCASB		8086
SCASD		386
SCASQ		X86_64, LONG
SCASW		8086
SFENCE		X86_64, LONG, AMD
SGDT	mem	286
SHL	rm8,unity	8086
SHL	rm8,reg_cl	8086
SHL	rm8,imm8	186
SHL	rm16,unity	8086
SHL	rm16,reg_cl	8086
SHL	rm16,imm8	186
SHL	rm32,unity	386
SHL	rm32,reg_cl	386
SHL	rm32,imm8	386
SHL	rm64,unity	X86_64, LONG
SHL	rm64,reg_cl	X86_64, LONG
SHL	rm64,imm8	X86_64, LONG
SHLD	mem,reg16,imm	386
SHLD	reg16,reg16,imm	386
SHLD	mem,reg32,imm	386
SHLD	reg32,reg32,imm	386
SHLD	mem,reg64,imm	X86_64, LONG
SHLD	reg64,reg64,imm	X86_64, LONG
SHLD	mem,reg16,reg_cl	386
SHLD	reg16,reg16,reg_cl	386
SHLD	mem,reg32,reg_cl	386
SHLD	reg32,reg32,reg_cl	386
SHLD	mem,reg64,reg_cl	X86_64, LONG
SHLD	reg64,reg64,reg_cl	X86_64, LONG
SHR	rm8,unity	8086
SHR	rm8,reg_cl	8086
SHR	rm8,imm8	186
SHR	rm16,unity	8086
SHR	rm16,reg_cl	8086
SHR	rm16,imm8	186
SHR	rm32,unity	386
SHR	rm32,reg_cl	386
SHR	rm32,imm8	386
SHR	rm64,unity	X86_64, LONG
SHR	rm64,reg_cl	X86_64, LONG
SHR	rm64,imm8	X86_64, LONG
SHRD	mem,reg16,imm	386
SHRD	reg16,reg16,imm	386
SHRD	mem,reg32,imm	386
SHRD	reg32,reg32,imm	386
SHRD	mem,reg64,imm	X86_64, LONG
SHRD	reg64,reg64,imm	X86_64, LONG

SHRD	mem,reg16,reg_cl	386
SHRD	reg16,reg16,reg_cl	386
SHRD	mem,reg32,reg_cl	386
SHRD	reg32,reg32,reg_cl	386
SHRD	mem,reg64,reg_cl	X86_64, LONG
SHRD	reg64,reg64,reg_cl	X86_64, LONG
SIDT	mem	286
SLDT	mem	286
SLDT	mem16	286
SLDT	reg16	286
SLDT	reg32	386
SLDT	reg64	X86_64, LONG, ND
SLDT	reg64	X86_64, LONG
SKINIT		X86_64, LONG
SMI		386, UNDOC
SMINT		P6, CYRIX, ND
SMINTOLD		486, CYRIX, ND, OBSOLETE
SMSW	mem	286
SMSW	mem16	286
SMSW	reg16	286
SMSW	reg32	386
SMSW	reg64	X86_64, LONG
STC		8086
STD		8086
STI		8086
STOSB		8086
STOSD		386
STOSQ		X86_64, LONG
STOSW		8086
STR	mem	286, PROT
STR	mem16	286, PROT
STR	reg16	286, PROT
STR	reg32	386, PROT
STR	reg64	X86_64, LONG
SUB	mem,reg8	8086, LOCK
SUB	reg8,reg8	8086
SUB	mem,reg16	8086, LOCK
SUB	reg16,reg16	8086
SUB	mem,reg32	386, LOCK
SUB	reg32,reg32	386
SUB	mem,reg64	X86_64, LONG, LOCK
SUB	reg64,reg64	X86_64, LONG
SUB	reg8,mem	8086
SUB	reg8,reg8	8086
SUB	reg16,mem	8086
SUB	reg16,reg16	8086
SUB	reg32,mem	386
SUB	reg32,reg32	386
SUB	reg64,mem	X86_64, LONG
SUB	reg64,reg64	X86_64, LONG
SUB	rm16,imm8	8086, LOCK
SUB	rm32,imm8	386, LOCK
SUB	rm64,imm8	X86_64, LONG, LOCK
SUB	reg_al,imm	8086
SUB	reg_ax,sbytedword	8086, ND
SUB	reg_ax,imm	8086
SUB	reg_eax,sbytedword	386, ND
SUB	reg_eax,imm	386
SUB	reg_rax,sbytedword	X86_64, LONG, ND
SUB	reg_rax,imm	X86_64, LONG

SUB	rm8,imm	8086,LOCK
SUB	rm16,sbyteword	8086,LOCK,ND
SUB	rm16,imm	8086,LOCK
SUB	rm32,sbytedword	386,LOCK,ND
SUB	rm32,imm	386,LOCK
SUB	rm64,sbytedword	X86_64, LONG, LOCK, ND
SUB	rm64,imm	X86_64, LONG, LOCK
SUB	mem,imm8	8086,LOCK
SUB	mem,sbyteword16	8086,LOCK,ND
SUB	mem,imm16	8086,LOCK
SUB	mem,sbytedword32	386,LOCK,ND
SUB	mem,imm32	386,LOCK
SUB	rm8,imm	8086,LOCK,ND,NOLONG
SVDC	mem80,reg_sreg	486,CYRIX,SMM
SVLDT	mem80	486,CYRIX,SMM,ND
SVTS	mem80	486,CYRIX,SMM
SWAPGS		X86_64, LONG
SYSCALL		P6,AMD
SYSENTER		P6
SYSEXIT		P6,PRIV
SYSRET		P6,PRIV,AMD
TEST	mem,reg8	8086
TEST	reg8,reg8	8086
TEST	mem,reg16	8086
TEST	reg16,reg16	8086
TEST	mem,reg32	386
TEST	reg32,reg32	386
TEST	mem,reg64	X86_64, LONG
TEST	reg64,reg64	X86_64, LONG
TEST	reg8,mem	8086
TEST	reg16,mem	8086
TEST	reg32,mem	386
TEST	reg64,mem	X86_64, LONG
TEST	reg_al,imm	8086
TEST	reg_ax,imm	8086
TEST	reg_eax,imm	386
TEST	reg_rax,imm	X86_64, LONG
TEST	rm8,imm	8086
TEST	rm16,imm	8086
TEST	rm32,imm	386
TEST	rm64,imm	X86_64, LONG
TEST	mem,imm8	8086
TEST	mem,imm16	8086
TEST	mem,imm32	386
UD0		186,OBSOLETE
UD0	reg16,rm16	186
UD0	reg32,rm32	186
UD0	reg64,rm64	186
UD1	reg16,rm16	186
UD1	reg32,rm32	186
UD1	reg64,rm64	186
UD1		186,ND
UD2B		186,ND
UD2B	reg16,rm16	186,ND
UD2B	reg32,rm32	186,ND
UD2B	reg64,rm64	186,ND
UD2		186
UD2A		186,ND
UMOV	mem,reg8	386,UNDOC,ND
UMOV	reg8,reg8	386,UNDOC,ND

UMOV	mem,reg16	386,UNDOC,ND
UMOV	reg16,reg16	386,UNDOC,ND
UMOV	mem,reg32	386,UNDOC,ND
UMOV	reg32,reg32	386,UNDOC,ND
UMOV	reg8,mem	386,UNDOC,ND
UMOV	reg8,reg8	386,UNDOC,ND
UMOV	reg16,mem	386,UNDOC,ND
UMOV	reg16,reg16	386,UNDOC,ND
UMOV	reg32,mem	386,UNDOC,ND
UMOV	reg32,reg32	386,UNDOC,ND
VERR	mem	286,PROT
VERR	mem16	286,PROT
VERR	reg16	286,PROT
VERW	mem	286,PROT
VERW	mem16	286,PROT
VERW	reg16	286,PROT
FWAIT		8086
WBINVD		486,PRIV
WRSHR	rm32	P6,CYRIX,SMM
WRMSR		PENT,PRIV
XADD	mem,reg8	486,LOCK
XADD	reg8,reg8	486
XADD	mem,reg16	486,LOCK
XADD	reg16,reg16	486
XADD	mem,reg32	486,LOCK
XADD	reg32,reg32	486
XADD	mem,reg64	X86_64, LONG, LOCK
XADD	reg64,reg64	X86_64, LONG
XBTS	reg16,mem	386,SW,UNDOC,ND
XBTS	reg16,reg16	386,UNDOC,ND
XBTS	reg32,mem	386,SD,UNDOC,ND
XBTS	reg32,reg32	386,UNDOC,ND
XCHG	reg_ax,reg16	8086
XCHG	reg_eax,reg32na	386
XCHG	reg_rax,reg64	X86_64, LONG
XCHG	reg16,reg_ax	8086
XCHG	reg32na,reg_eax	386
XCHG	reg64,reg_rax	X86_64, LONG
XCHG	reg_eax,reg_eax	386,NOLONG
XCHG	reg8,mem	8086,LOCK
XCHG	reg8,reg8	8086
XCHG	reg16,mem	8086,LOCK
XCHG	reg16,reg16	8086
XCHG	reg32,mem	386,LOCK
XCHG	reg32,reg32	386
XCHG	reg64,mem	X86_64, LONG, LOCK
XCHG	reg64,reg64	X86_64, LONG
XCHG	mem,reg8	8086,LOCK
XCHG	reg8,reg8	8086
XCHG	mem,reg16	8086,LOCK
XCHG	reg16,reg16	8086
XCHG	mem,reg32	386,LOCK
XCHG	reg32,reg32	386
XCHG	mem,reg64	X86_64, LONG, LOCK
XCHG	reg64,reg64	X86_64, LONG
XLATB		8086
XLAT		8086
XOR	mem,reg8	8086,LOCK
XOR	reg8,reg8	8086
XOR	mem,reg16	8086,LOCK

XOR	reg16,reg16	8086
XOR	mem,reg32	386, LOCK
XOR	reg32,reg32	386
XOR	mem,reg64	X86_64, LONG, LOCK
XOR	reg64,reg64	X86_64, LONG
XOR	reg8,mem	8086
XOR	reg8,reg8	8086
XOR	reg16,mem	8086
XOR	reg16,reg16	8086
XOR	reg32,mem	386
XOR	reg32,reg32	386
XOR	reg64,mem	X86_64, LONG
XOR	reg64,reg64	X86_64, LONG
XOR	rm16,imm8	8086, LOCK
XOR	rm32,imm8	386, LOCK
XOR	rm64,imm8	X86_64, LONG, LOCK
XOR	reg_al,imm	8086
XOR	reg_ax,sbytedword	8086, ND
XOR	reg_ax,imm	8086
XOR	reg_eax,sbytedword	386, ND
XOR	reg_eax,imm	386
XOR	reg_rax,sbytedword	X86_64, LONG, ND
XOR	reg_rax,imm	X86_64, LONG
XOR	rm8,imm	8086, LOCK
XOR	rm16,sbytedword	8086, LOCK, ND
XOR	rm16,imm	8086, LOCK
XOR	rm32,sbytedword	386, LOCK, ND
XOR	rm32,imm	386, LOCK
XOR	rm64,sbytedword	X86_64, LONG, LOCK, ND
XOR	rm64,imm	X86_64, LONG, LOCK
XOR	mem,imm8	8086, LOCK
XOR	mem,sbytedword16	8086, LOCK, ND
XOR	mem,imm16	8086, LOCK
XOR	mem,sbytedword32	386, LOCK, ND
XOR	mem,imm32	386, LOCK
XOR	rm8,imm	8086, LOCK, ND, NOLONG
CMOVcc	reg16,mem	P6
CMOVcc	reg16,reg16	P6
CMOVcc	reg32,mem	P6
CMOVcc	reg32,reg32	P6
CMOVcc	reg64,mem	X86_64, LONG
CMOVcc	reg64,reg64	X86_64, LONG
Jcc	imm near	386, BND
Jcc	imm16 near	386, NOLONG, BND
Jcc	imm32 near	386, NOLONG, BND
Jcc	imm64 near	X86_64, LONG, BND
Jcc	imm short	8086, ND, BND
Jcc	imm	8086, ND, BND
Jcc	imm	386, ND, BND
Jcc	imm	8086, ND, BND
Jcc	imm	8086, BND
SETcc	mem	386
SETcc	reg8	386

B.1.3 Katmai Streaming SIMD instructions (SSE -- a.k.a. KNI, XMM, MMX2)

ADDPS	xmmreg,xmmrm128	KATMAI, SSE
ADDSS	xmmreg,xmmrm32	KATMAI, SSE
ANDNPS	xmmreg,xmmrm128	KATMAI, SSE

ANDPS	xmmreg,xmmrm128	KATMAI,SSE
CMPEQPS	xmmreg,xmmrm128	KATMAI,SSE
CMPEQSS	xmmreg,xmmrm32	KATMAI,SSE
CMPLEPS	xmmreg,xmmrm128	KATMAI,SSE
CMPLESS	xmmreg,xmmrm32	KATMAI,SSE
CMPLTPS	xmmreg,xmmrm128	KATMAI,SSE
CMPLTSS	xmmreg,xmmrm32	KATMAI,SSE
CMPNEQPS	xmmreg,xmmrm128	KATMAI,SSE
CMPNEQSS	xmmreg,xmmrm32	KATMAI,SSE
CMPNLEPS	xmmreg,xmmrm128	KATMAI,SSE
CMPNLESS	xmmreg,xmmrm32	KATMAI,SSE
CMPNLTPS	xmmreg,xmmrm128	KATMAI,SSE
CMPNLTSS	xmmreg,xmmrm32	KATMAI,SSE
CMPORDPS	xmmreg,xmmrm128	KATMAI,SSE
CMPORDSS	xmmreg,xmmrm32	KATMAI,SSE
CMPUNORDPS	xmmreg,xmmrm128	KATMAI,SSE
CMPUNORDSS	xmmreg,xmmrm32	KATMAI,SSE
CMPPS	xmmreg,xmmrm128,imm8	KATMAI,SSE
CMPSS	xmmreg,xmmrm32,imm8	KATMAI,SSE
COMISS	xmmreg,xmmrm32	KATMAI,SSE
CVTPI2PS	xmmreg,mmxrm64	KATMAI,SSE,MMX
CVTPS2PI	mmxreg,xmmrm64	KATMAI,SSE,MMX
CVTSI2SS	xmmreg,mem	KATMAI,SSE,SD,AR1,ND
CVTSI2SS	xmmreg,rm32	KATMAI,SSE,SD,AR1
CVTSI2SS	xmmreg,rm64	X86_64, LONG, SSE, AR1
CVTSS2SI	reg32,xmmreg	KATMAI,SSE,SD,AR1
CVTSS2SI	reg32,mem	KATMAI,SSE,SD,AR1
CVTSS2SI	reg64,xmmreg	X86_64, LONG, SSE, SD, AR1
CVTSS2SI	reg64,mem	X86_64, LONG, SSE, SD, AR1
CVTTPS2PI	mmxreg,xmmrm	KATMAI,SSE,MMX
CVTTSS2SI	reg32,xmmrm	KATMAI,SSE,SD,AR1
CVTTSS2SI	reg64,xmmrm	X86_64, LONG, SSE, SD, AR1
DIVPS	xmmreg,xmmrm128	KATMAI,SSE
DIVSS	xmmreg,xmmrm32	KATMAI,SSE
LDMXCSR	mem32	KATMAI,SSE
MAXPS	xmmreg,xmmrm128	KATMAI,SSE
MAXSS	xmmreg,xmmrm32	KATMAI,SSE
MINPS	xmmreg,xmmrm128	KATMAI,SSE
MINSS	xmmreg,xmmrm32	KATMAI,SSE
MOVAPS	xmmreg,xmmrm128	KATMAI,SSE
MOVAPS	xmmrm128,xmmreg	KATMAI,SSE
MOVHPS	xmmreg,mem64	KATMAI,SSE
MOVHPS	mem64,xmmreg	KATMAI,SSE
MOVLHPS	xmmreg,xmmreg	KATMAI,SSE
MOVLPS	xmmreg,mem64	KATMAI,SSE
MOVLPS	mem64,xmmreg	KATMAI,SSE
MOVHLPS	xmmreg,xmmreg	KATMAI,SSE
MOVMSKPS	reg32,xmmreg	KATMAI,SSE
MOVMSKPS	reg64,xmmreg	X86_64, LONG, SSE
MOVNTPS	mem128,xmmreg	KATMAI,SSE
MOVSS	xmmreg,xmmrm32	KATMAI,SSE
MOVSS	xmmrm32,xmmreg	KATMAI,SSE
MOVUPS	xmmreg,xmmrm128	KATMAI,SSE
MOVUPS	xmmrm128,xmmreg	KATMAI,SSE
MULPS	xmmreg,xmmrm128	KATMAI,SSE
MULSS	xmmreg,xmmrm32	KATMAI,SSE
ORPS	xmmreg,xmmrm128	KATMAI,SSE
RCPPS	xmmreg,xmmrm128	KATMAI,SSE
RCPSS	xmmreg,xmmrm32	KATMAI,SSE
RSQRTPS	xmmreg,xmmrm128	KATMAI,SSE

RSQRTSS	xmmreg,xmmrm32	KATMAI,SSE
SHUFPS	xmmreg,xmmrm128,imm8	KATMAI,SSE
SQRTPS	xmmreg,xmmrm128	KATMAI,SSE
SQRTSS	xmmreg,xmmrm32	KATMAI,SSE
STMXCSR	mem32	KATMAI,SSE
SUBPS	xmmreg,xmmrm128	KATMAI,SSE
SUBSS	xmmreg,xmmrm32	KATMAI,SSE
UCOMISS	xmmreg,xmmrm32	KATMAI,SSE
UNPCKHPS	xmmreg,xmmrm128	KATMAI,SSE
UNPCKLPS	xmmreg,xmmrm128	KATMAI,SSE
XORPS	xmmreg,xmmrm128	KATMAI,SSE

B.1.4 Introduced in Deschutes but necessary for SSE support

FXRSTOR	mem	P6,SSE,FPU
FXRSTOR64	mem	X86_64, LONG, SSE, FPU
FXSAVE	mem	P6,SSE,FPU
FXSAVE64	mem	X86_64, LONG, SSE, FPU

B.1.5 XSAVE group (AVX and extended state)

XGETBV		NEHALEM
XSETBV		NEHALEM, PRIV
XSAVE	mem	NEHALEM
XSAVE64	mem	LONG, NEHALEM
XSAVEC	mem	
XSAVEC64	mem	LONG
XSAVEOPT	mem	
XSAVEOPT64	mem	LONG
XSAVES	mem	
XSAVES64	mem	LONG
XRSTOR	mem	NEHALEM
XRSTOR64	mem	LONG, NEHALEM
XRSTORS	mem	
XRSTORS64	mem	LONG

B.1.6 Generic memory operations

PREFETCHNTA	mem8	KATMAI
PREFETCHT0	mem8	KATMAI
PREFETCHT1	mem8	KATMAI
PREFETCHT2	mem8	KATMAI
SFENCE		KATMAI

B.1.7 New MMX instructions introduced in Katmai

MASKMOVQ	mmxreg,mmxreg	KATMAI,MMX
MOVNTQ	mem,mmxreg	KATMAI,MMX
PAVGB	mmxreg,mmxrm	KATMAI,MMX
PAVGW	mmxreg,mmxrm	KATMAI,MMX
PEXTRW	reg32,mmxreg,imm	KATMAI,MMX
PINSRW	mmxreg,mem,imm	KATMAI,MMX
PINSRW	mmxreg,rm16,imm	KATMAI,MMX
PINSRW	mmxreg,reg32,imm	KATMAI,MMX
PMAXSW	mmxreg,mmxrm	KATMAI,MMX
PMAXUB	mmxreg,mmxrm	KATMAI,MMX

PMINSW	mmxreg,mmxrm	KATMAI,MMX
PMINUB	mmxreg,mmxrm	KATMAI,MMX
PMOVMSKB	reg32,mmxreg	KATMAI,MMX
PMULHUW	mmxreg,mmxrm	KATMAI,MMX
PSADBW	mmxreg,mmxrm	KATMAI,MMX
PSHUFW	mmxreg,mmxrm,imm	KATMAI,MMX

B.1.8 AMD Enhanced 3DNow! (Athlon) instructions

PF2IW	mmxreg,mmxrm	PENT,3DNOW
PFNACC	mmxreg,mmxrm	PENT,3DNOW
PFPNACC	mmxreg,mmxrm	PENT,3DNOW
PI2FW	mmxreg,mmxrm	PENT,3DNOW
PSWAPD	mmxreg,mmxrm	PENT,3DNOW

B.1.9 Willamette SSE2 Cacheability Instructions

MASKMOVDQU	xmmreg,xmmreg	WILLAMETTE,SSE2
CLFLUSH	mem	WILLAMETTE,SSE2
MOVNTDQ	mem,xmmreg	WILLAMETTE,SSE2,SO
MOVNTI	mem,reg32	WILLAMETTE,SD
MOVNTI	mem,reg64	X86_64, LONG
MOVNTPD	mem,xmmreg	WILLAMETTE,SSE2,SO
LFENCE		WILLAMETTE,SSE2
MFENCE		WILLAMETTE,SSE2

B.1.10 Willamette MMX instructions (SSE2 SIMD Integer Instructions)

MOVD	mem,xmmreg	WILLAMETTE,SSE2,SD
MOVD	xmmreg,mem	WILLAMETTE,SSE2,SD
MOVD	xmmreg,rm32	WILLAMETTE,SSE2
MOVD	rm32,xmmreg	WILLAMETTE,SSE2
MOVDQA	xmmreg,xmmrm128	WILLAMETTE,SSE2,SO
MOVDQA	xmmrm128,xmmreg	WILLAMETTE,SSE2,SO
MOVDQU	xmmreg,xmmrm128	WILLAMETTE,SSE2,SO
MOVDQU	xmmrm128,xmmreg	WILLAMETTE,SSE2,SO
MOVDQ2Q	mmxreg,xmmreg	WILLAMETTE,SSE2
MOVQ	xmmreg,xmmreg	WILLAMETTE,SSE2
MOVQ	xmmreg,xmmreg	WILLAMETTE,SSE2
MOVQ	mem,xmmreg	WILLAMETTE,SSE2
MOVQ	xmmreg,mem	WILLAMETTE,SSE2
MOVQ	xmmreg,rm64	X86_64, LONG, SSE2
MOVQ	rm64,xmmreg	X86_64, LONG, SSE2
MOVQ2DQ	xmmreg,mmxreg	WILLAMETTE,SSE2
PACKSSWB	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PACKSSDW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PACKUSWB	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PADDB	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PADDW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PADDD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PADDQ	mmxreg,mmxrm	WILLAMETTE,MMX
PADDQ	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PADDSB	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PADDSW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PADDUSB	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PADDUSW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PAND	xmmreg,xmmrm	WILLAMETTE,SSE2,SO

PANDN	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PAVGB	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PAVGW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PCMPEQB	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PCMPEQW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PCMPEQD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PCMPGTB	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PCMPGTW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PCMPGTD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PEXTRW	reg32,xmmreg,imm	WILLAMETTE,SSE2
PEXTRW	reg64,xmmreg,imm	X86_64, LONG, SSE2, ND
PINSRW	xmmreg,reg16,imm	WILLAMETTE,SSE2
PINSRW	xmmreg,reg32,imm	WILLAMETTE,SSE2,ND
PINSRW	xmmreg,reg64,imm	X86_64, LONG, SSE2, ND
PINSRW	xmmreg,mem,imm	WILLAMETTE,SSE2
PINSRW	xmmreg,mem16,imm	WILLAMETTE,SSE2
PMADDWD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PMAXSW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PMAXUB	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PMINSW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PMINUB	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PMOVMSKB	reg32,xmmreg	WILLAMETTE,SSE2
PMULHUW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PMULHW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PMULLW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PMULUDQ	mmxreg,mmxrm	WILLAMETTE,SSE2,SO
PMULUDQ	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
POR	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSADBW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSHUFD	xmmreg,xmmreg,imm	WILLAMETTE,SSE2
PSHUFD	xmmreg,mem,imm	WILLAMETTE,SSE2
PSHUFHW	xmmreg,xmmreg,imm	WILLAMETTE,SSE2
PSHUFHW	xmmreg,mem,imm	WILLAMETTE,SSE2
PSHUFLW	xmmreg,xmmreg,imm	WILLAMETTE,SSE2
PSHUFLW	xmmreg,mem,imm	WILLAMETTE,SSE2
PSLLDQ	xmmreg,imm	WILLAMETTE,SSE2,AR1
PSLLW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSLLW	xmmreg,imm	WILLAMETTE,SSE2,AR1
PSLLD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSLLD	xmmreg,imm	WILLAMETTE,SSE2,AR1
PSLLQ	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSLLQ	xmmreg,imm	WILLAMETTE,SSE2,AR1
PSRAW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSRAW	xmmreg,imm	WILLAMETTE,SSE2,AR1
PSRAD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSRAD	xmmreg,imm	WILLAMETTE,SSE2,AR1
PSRLDQ	xmmreg,imm	WILLAMETTE,SSE2,AR1
PSRLW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSRLW	xmmreg,imm	WILLAMETTE,SSE2,AR1
PSRLD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSRLD	xmmreg,imm	WILLAMETTE,SSE2,AR1
PSRLQ	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSRLQ	xmmreg,imm	WILLAMETTE,SSE2,AR1
PSUBB	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSUBW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSUBD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSUBQ	mmxreg,mmxrm	WILLAMETTE,SSE2,SO
PSUBQ	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSUBSB	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSUBSW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO

PSUBUSB	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PSUBUSW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PUNPCKHBW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PUNPCKHWD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PUNPCKHDQ	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PUNPCKHQDQ	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PUNPCKLBW	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PUNPCKLWD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PUNPCKLDQ	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PUNPCKLQDQ	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
PXOR	xmmreg,xmmrm	WILLAMETTE,SSE2,SO

B.1.11 Willamette Streaming SIMD instructions (SSE2)

ADDPD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
ADDSD	xmmreg,xmmrm	WILLAMETTE,SSE2
ANDNPD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
ANDPD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CMPEQPD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CMPEQSD	xmmreg,xmmrm	WILLAMETTE,SSE2
CMPLEPD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CMPLESD	xmmreg,xmmrm	WILLAMETTE,SSE2
CMPLTPD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CMPLTSD	xmmreg,xmmrm	WILLAMETTE,SSE2
CMPNEQPD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CMPNEQSD	xmmreg,xmmrm	WILLAMETTE,SSE2
CMPNLEPD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CMPNLESD	xmmreg,xmmrm	WILLAMETTE,SSE2
CMPNLTPD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CMPNLTSD	xmmreg,xmmrm	WILLAMETTE,SSE2
CMPORDPD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CMPORDSD	xmmreg,xmmrm	WILLAMETTE,SSE2
CMPUNORDPD	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CMPUNORDSD	xmmreg,xmmrm	WILLAMETTE,SSE2
CMPPD	xmmreg,xmmrm128,imm8	WILLAMETTE,SSE2
CMPSD	xmmreg,xmmrm128,imm8	WILLAMETTE,SSE2
COMISD	xmmreg,xmmrm64	WILLAMETTE,SSE2
CVTDQ2PD	xmmreg,xmmrm	WILLAMETTE,SSE2
CVTDQ2PS	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CVTPD2DQ	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CVTPD2PI	mmxreg,xmmrm	WILLAMETTE,SSE2,SO
CVTPD2PS	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CVTPI2PD	xmmreg,mmxrm	WILLAMETTE,SSE2
CVTPS2DQ	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CVTPS2PD	xmmreg,xmmrm	WILLAMETTE,SSE2
CVTSD2SI	reg32,xmmreg	WILLAMETTE,SSE2,AR1
CVTSD2SI	reg32,mem	WILLAMETTE,SSE2,AR1
CVTSD2SI	reg64,xmmreg	X86_64, LONG, SSE2, AR1
CVTSD2SI	reg64,mem	X86_64, LONG, SSE2, AR1
CVTSD2SS	xmmreg,xmmrm	WILLAMETTE,SSE2
CVTSI2SD	xmmreg,mem	WILLAMETTE,SSE2,SD,AR1,ND
CVTSI2SD	xmmreg,rm32	WILLAMETTE,SSE2,SD,AR1
CVTSI2SD	xmmreg,rm64	X86_64, LONG, SSE2, AR1
CVTSS2SD	xmmreg,xmmrm	WILLAMETTE,SSE2,SD
CVTTPD2PI	mmxreg,xmmrm	WILLAMETTE,SSE2,SO
CVTTPD2DQ	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CVTTPS2DQ	xmmreg,xmmrm	WILLAMETTE,SSE2,SO
CVTTSD2SI	reg32,xmmreg	WILLAMETTE,SSE2,AR1
CVTTSD2SI	reg32,mem	WILLAMETTE,SSE2,AR1

CVTTSD2SI	reg64,xmmreg	X86_64, LONG, SSE2, AR1
CVTTSD2SI	reg64,mem	X86_64, LONG, SSE2, AR1
DIVPD	xmmreg,xmmrm	WILLAMETTE, SSE2, SO
DIVSD	xmmreg,xmmrm	WILLAMETTE, SSE2
MAXPD	xmmreg,xmmrm	WILLAMETTE, SSE2, SO
MAXSD	xmmreg,xmmrm	WILLAMETTE, SSE2
MINPD	xmmreg,xmmrm	WILLAMETTE, SSE2, SO
MINSD	xmmreg,xmmrm	WILLAMETTE, SSE2
MOVAPD	xmmreg,xmmrm128	WILLAMETTE, SSE2
MOVAPD	xmmrm128,xmmreg	WILLAMETTE, SSE2
MOVHPD	mem64,xmmreg	WILLAMETTE, SSE2
MOVHPD	xmmreg,mem64	WILLAMETTE, SSE2
MOVLPD	mem64,xmmreg	WILLAMETTE, SSE2
MOVLPD	xmmreg,mem64	WILLAMETTE, SSE2
MOVMSKPD	reg32,xmmreg	WILLAMETTE, SSE2
MOVMSKPD	reg64,xmmreg	X86_64, LONG, SSE2
MOVSD	xmmreg,xmmrm64	WILLAMETTE, SSE2
MOVSD	xmmrm64,xmmreg	WILLAMETTE, SSE2
MOVUPD	xmmreg,xmmrm128	WILLAMETTE, SSE2
MOVUPD	xmmrm128,xmmreg	WILLAMETTE, SSE2
MULPD	xmmreg,xmmrm128	WILLAMETTE, SSE2, SO
MULSD	xmmreg,xmmrm64	WILLAMETTE, SSE2
ORPD	xmmreg,xmmrm128	WILLAMETTE, SSE2, SO
SHUFPD	xmmreg,xmmrm128,imm8	WILLAMETTE, SSE2
SQRTPD	xmmreg,xmmrm128	WILLAMETTE, SSE2, SO
SQRTSD	xmmreg,xmmrm64	WILLAMETTE, SSE2
SUBPD	xmmreg,xmmrm128	WILLAMETTE, SSE2, SO
SUBSD	xmmreg,xmmrm64	WILLAMETTE, SSE2
UCOMISD	xmmreg,xmmrm64	WILLAMETTE, SSE2
UNPCKHPD	xmmreg,xmmrm128	WILLAMETTE, SSE2
UNPCKLPD	xmmreg,xmmrm128	WILLAMETTE, SSE2
XORPD	xmmreg,xmmrm128	WILLAMETTE, SSE2

B.1.12 Prescott New Instructions (SSE3)

ADDSUBPD	xmmreg,xmmrm128	PRESCOTT, SSE3, SO
ADDSUBPS	xmmreg,xmmrm128	PRESCOTT, SSE3, SO
HADDPD	xmmreg,xmmrm128	PRESCOTT, SSE3, SO
HADDPS	xmmreg,xmmrm128	PRESCOTT, SSE3, SO
HSUBPD	xmmreg,xmmrm128	PRESCOTT, SSE3, SO
HSUBPS	xmmreg,xmmrm128	PRESCOTT, SSE3, SO
LDDQU	xmmreg,mem128	PRESCOTT, SSE3, SO
MOVDDUP	xmmreg,xmmrm64	PRESCOTT, SSE3
MOVSHDUP	xmmreg,xmmrm128	PRESCOTT, SSE3
MOVSLDUP	xmmreg,xmmrm128	PRESCOTT, SSE3

B.1.13 VMX/SVM Instructions

CLGI		VMX,AMD
STGI		VMX,AMD
VMCALL		VMX
VMCLEAR	mem	VMX
VMFUNC		VMX
VMLAUNCH		VMX
VMLOAD		VMX,AMD
VMMCALL		VMX,AMD
VMPTRLD	mem	VMX
VMPTRST	mem	VMX

VMREAD	rm32,reg32	VMX,NOLONG,SD
VMREAD	rm64,reg64	X86_64, LONG, VMX
VMRESUME		VMX
VMRUN		VMX,AMD
VMSAVE		VMX,AMD
VMWRITE	reg32,rm32	VMX,NOLONG,SD
VMWRITE	reg64,rm64	X86_64, LONG, VMX
VMXOFF		VMX
VMXON	mem	VMX

B.1.14 Extended Page Tables VMX instructions

INVEPT	reg32,mem	VMX,SO,NOLONG
INVEPT	reg64,mem	VMX,SO, LONG
INVVPID	reg32,mem	VMX,SO,NOLONG
INVVPID	reg64,mem	VMX,SO, LONG

B.1.15 Tejas New Instructions (SSSE3)

PABSB	mmxreg,mmxrm	SSSE3,MMX
PABSB	xmmreg,xmmrm128	SSSE3
PABSW	mmxreg,mmxrm	SSSE3,MMX
PABSW	xmmreg,xmmrm128	SSSE3
PABSD	mmxreg,mmxrm	SSSE3,MMX
PABSD	xmmreg,xmmrm128	SSSE3
PALIGNR	mmxreg,mmxrm,imm	SSSE3,MMX
PALIGNR	xmmreg,xmmrm,imm	SSSE3
PHADDW	mmxreg,mmxrm	SSSE3,MMX
PHADDW	xmmreg,xmmrm128	SSSE3
PHADDD	mmxreg,mmxrm	SSSE3,MMX
PHADDD	xmmreg,xmmrm128	SSSE3
PHADDSW	mmxreg,mmxrm	SSSE3,MMX
PHADDSW	xmmreg,xmmrm128	SSSE3
PHSUBW	mmxreg,mmxrm	SSSE3,MMX
PHSUBW	xmmreg,xmmrm128	SSSE3
PHSUBD	mmxreg,mmxrm	SSSE3,MMX
PHSUBD	xmmreg,xmmrm128	SSSE3
PHSUBSW	mmxreg,mmxrm	SSSE3,MMX
PHSUBSW	xmmreg,xmmrm128	SSSE3
PMADDUBSW	mmxreg,mmxrm	SSSE3,MMX
PMADDUBSW	xmmreg,xmmrm128	SSSE3
PMULHRSW	mmxreg,mmxrm	SSSE3,MMX
PMULHRSW	xmmreg,xmmrm128	SSSE3
PSHUFB	mmxreg,mmxrm	SSSE3,MMX
PSHUFB	xmmreg,xmmrm128	SSSE3
PSIGNB	mmxreg,mmxrm	SSSE3,MMX
PSIGNB	xmmreg,xmmrm128	SSSE3
PSIGNW	mmxreg,mmxrm	SSSE3,MMX
PSIGNW	xmmreg,xmmrm128	SSSE3
PSIGND	mmxreg,mmxrm	SSSE3,MMX
PSIGND	xmmreg,xmmrm128	SSSE3

B.1.16 AMD SSE4A

EXTRQ	xmmreg,imm,imm	SSE4A,AMD
EXTRQ	xmmreg,xmmreg	SSE4A,AMD
INSERTQ	xmmreg,xmmreg,imm,imm	SSE4A,AMD

INSERTQ	xmmreg,xmmreg	SSE4A,AMD
MOVNTSD	mem64,xmmreg	SSE4A,AMD
MOVNTSS	mem32,xmmreg	SSE4A,AMD,SD

B.1.17 New instructions in Barcelona

LZCNT	reg16,rm16	P6,AMD
LZCNT	reg32,rm32	P6,AMD
LZCNT	reg64,rm64	X86_64, LONG,AMD

B.1.18 Penryn New Instructions (SSE4.1)

BLENDDP	xmmreg,xmmrm128,imm8	SSE41
BLENDPS	xmmreg,xmmrm128,imm8	SSE41
BLENDVPD	xmmreg,xmmrm128,xmm0	SSE41
BLENDVPD	xmmreg,xmmrm128	SSE41
BLENDVPS	xmmreg,xmmrm128,xmm0	SSE41
BLENDVPS	xmmreg,xmmrm128	SSE41
DPPD	xmmreg,xmmrm128,imm8	SSE41
DPPS	xmmreg,xmmrm128,imm8	SSE41
EXTRACTPS	rm32,xmmreg,imm8	SSE41
EXTRACTPS	reg64,xmmreg,imm8	SSE41,X86_64, LONG
INSERTPS	xmmreg,xmmrm32,imm8	SSE41
MOVNTDQA	xmmreg,mem128	SSE41
MPSADBW	xmmreg,xmmrm128,imm8	SSE41
PACKUSDW	xmmreg,xmmrm128	SSE41
PBLENDVB	xmmreg,xmmrm,xmm0	SSE41
PBLENDVB	xmmreg,xmmrm128	SSE41
PBLENDW	xmmreg,xmmrm128,imm8	SSE41
PCMPEQQ	xmmreg,xmmrm128	SSE41
PEXTRB	reg32,xmmreg,imm8	SSE41
PEXTRB	mem8,xmmreg,imm8	SSE41
PEXTRB	reg64,xmmreg,imm8	SSE41,X86_64, LONG
PEXTRD	rm32,xmmreg,imm8	SSE41
PEXTRQ	rm64,xmmreg,imm8	SSE41,X86_64, LONG
PEXTRW	reg32,xmmreg,imm8	SSE41
PEXTRW	mem16,xmmreg,imm8	SSE41
PEXTRW	reg64,xmmreg,imm8	SSE41,X86_64, LONG
PHMINPOSUW	xmmreg,xmmrm128	SSE41
PINSRB	xmmreg,mem,imm8	SSE41
PINSRB	xmmreg,rm8,imm8	SSE41
PINSRB	xmmreg,reg32,imm8	SSE41
PINSRD	xmmreg,rm32,imm8	SSE41
PINSRQ	xmmreg,rm64,imm8	SSE41,X86_64, LONG
PMASB	xmmreg,xmmrm128	SSE41
PMASD	xmmreg,xmmrm128	SSE41
PMAXUD	xmmreg,xmmrm128	SSE41
PMAXUW	xmmreg,xmmrm128	SSE41
PMINSB	xmmreg,xmmrm128	SSE41
PMINSD	xmmreg,xmmrm128	SSE41
PMINUD	xmmreg,xmmrm128	SSE41
PMINUW	xmmreg,xmmrm128	SSE41
PMOVSXBW	xmmreg,xmmrm64	SSE41
PMOVSXBD	xmmreg,xmmrm32	SSE41,SD
PMOVSXBQ	xmmreg,xmmrm16	SSE41,SW
PMOVSXWD	xmmreg,xmmrm64	SSE41
PMOVSXWQ	xmmreg,xmmrm32	SSE41,SD
PMOVSXDQ	xmmreg,xmmrm64	SSE41

PMOVZXBW	xmmreg,xmmrm64	SSE41
PMOVZXBD	xmmreg,xmmrm32	SSE41,SD
PMOVZXBQ	xmmreg,xmmrm16	SSE41,SW
PMOVZXWD	xmmreg,xmmrm64	SSE41
PMOVZXWQ	xmmreg,xmmrm32	SSE41,SD
PMOVZXDQ	xmmreg,xmmrm64	SSE41
PMULDQ	xmmreg,xmmrm128	SSE41
PMULLD	xmmreg,xmmrm128	SSE41
PTEST	xmmreg,xmmrm128	SSE41
ROUNDPD	xmmreg,xmmrm128,imm8	SSE41
ROUNDPS	xmmreg,xmmrm128,imm8	SSE41
ROUNDSD	xmmreg,xmmrm64,imm8	SSE41
ROUNDSS	xmmreg,xmmrm32,imm8	SSE41

B.1.19 Nehalem New Instructions (SSE4.2)

CRC32	reg32,rm8	SSE42
CRC32	reg32,rm16	SSE42
CRC32	reg32,rm32	SSE42
CRC32	reg64,rm8	SSE42,X86_64, LONG
CRC32	reg64,rm64	SSE42,X86_64, LONG
PCMPESTRI	xmmreg,xmmrm128,imm8	SSE42
PCMPESTRM	xmmreg,xmmrm128,imm8	SSE42
PCMPISTRI	xmmreg,xmmrm128,imm8	SSE42
PCMPISTRM	xmmreg,xmmrm128,imm8	SSE42
PCMPGTQ	xmmreg,xmmrm128	SSE42
POPCNT	reg16,rm16	NEHALEM,SW
POPCNT	reg32,rm32	NEHALEM,SD
POPCNT	reg64,rm64	NEHALEM, LONG

B.1.20 Intel SMX

GETSEC	KATMAI
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B.1.21 Geode (Cyrix) 3DNow! additions

PFRCPV	mmxreg,mmxrm	PENT,3DNOW,CYRIX
PFRSQRTV	mmxreg,mmxrm	PENT,3DNOW,CYRIX

B.1.22 Intel new instructions in ???

MOVBE	reg16,mem16	NEHALEM
MOVBE	reg32,mem32	NEHALEM
MOVBE	reg64,mem64	NEHALEM
MOVBE	mem16,reg16	NEHALEM
MOVBE	mem32,reg32	NEHALEM
MOVBE	mem64,reg64	NEHALEM

B.1.23 Intel AES instructions

AESENC	xmmreg,xmmrm128	SSE, WESTMERE
AESENCLAST	xmmreg,xmmrm128	SSE, WESTMERE
AESDEC	xmmreg,xmmrm128	SSE, WESTMERE
AESDECLAST	xmmreg,xmmrm128	SSE, WESTMERE
AESIMC	xmmreg,xmmrm128	SSE, WESTMERE

AESKEYGENASSIST	xmmreg,xmmrm128,imm8	SSE, WESTMERE
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B.1.24 Intel AVX AES instructions

VAESENC	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VAESENCLAST	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VAESDEC	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VAESDECLAST	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VAESIMC	xmmreg,xmmrm128	AVX, SANDYBRIDGE
VAESKEYGENASSIST	xmmreg,xmmrm128,imm8	AVX, SANDYBRIDGE

B.1.25 Intel instruction extension based on pub number 319433-030 dated October 2017

VAESENC	ymmreg,ymmreg*,ymmrm256	VAES
VAESENCLAST	ymmreg,ymmreg*,ymmrm256	VAES
VAESDEC	ymmreg,ymmreg*,ymmrm256	VAES
VAESDECLAST	ymmreg,ymmreg*,ymmrm256	VAES
VAESENC	xmmreg,xmmreg*,xmmrm128	AVX512VL, VAES
VAESENC	ymmreg,ymmreg*,ymmrm256	AVX512VL, VAES
VAESENCLAST	xmmreg,xmmreg*,xmmrm128	AVX512VL, VAES
VAESENCLAST	ymmreg,ymmreg*,ymmrm256	AVX512VL, VAES
VAESDEC	xmmreg,xmmreg*,xmmrm128	AVX512VL, VAES
VAESDEC	ymmreg,ymmreg*,ymmrm256	AVX512VL, VAES
VAESDECLAST	xmmreg,xmmreg*,xmmrm128	AVX512VL, VAES
VAESDECLAST	ymmreg,ymmreg*,ymmrm256	AVX512VL, VAES
VAESENC	zmmreg,zmmreg*,zmmrm512	AVX512, VAES
VAESENCLAST	zmmreg,zmmreg*,zmmrm512	AVX512, VAES
VAESDEC	zmmreg,zmmreg*,zmmrm512	AVX512, VAES
VAESDECLAST	zmmreg,zmmreg*,zmmrm512	AVX512, VAES

B.1.26 Intel AVX instructions

VADDPD	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VADDPD	ymmreg,ymmreg*,ymmrm256	AVX, SANDYBRIDGE
VADDPS	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VADDPS	ymmreg,ymmreg*,ymmrm256	AVX, SANDYBRIDGE
VADDSD	xmmreg,xmmreg*,xmmrm64	AVX, SANDYBRIDGE
VADDSS	xmmreg,xmmreg*,xmmrm32	AVX, SANDYBRIDGE
VADDSUBPD	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VADDSUBPD	ymmreg,ymmreg*,ymmrm256	AVX, SANDYBRIDGE
VADDSUBPS	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VADDSUBPS	ymmreg,ymmreg*,ymmrm256	AVX, SANDYBRIDGE
VANDPD	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VANDPD	ymmreg,ymmreg*,ymmrm256	AVX, SANDYBRIDGE
VANDPS	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VANDPS	ymmreg,ymmreg*,ymmrm256	AVX, SANDYBRIDGE
VANDNPD	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VANDNPD	ymmreg,ymmreg*,ymmrm256	AVX, SANDYBRIDGE
VANDNPS	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VANDNPS	ymmreg,ymmreg*,ymmrm256	AVX, SANDYBRIDGE
VBLENDPD	xmmreg,xmmreg*,xmmrm128,imm8	AVX, SANDYBRIDGE
VBLENDPD	ymmreg,ymmreg*,ymmrm256,imm8	AVX, SANDYBRIDGE
VBLENDPS	xmmreg,xmmreg*,xmmrm128,imm8	AVX, SANDYBRIDGE
VBLENDPS	ymmreg,ymmreg*,ymmrm256,imm8	AVX, SANDYBRIDGE
VBLENDVPD	xmmreg,xmmreg*,xmmrm128,xmmreg	AVX, SANDYBRIDGE
VBLENDVPD	ymmreg,ymmreg*,ymmrm256,ymmreg	AVX, SANDYBRIDGE
VBLENDVPS	xmmreg,xmmreg*,xmmrm128,xmmreg	AVX, SANDYBRIDGE

VBLENDVPS	ymmreg,ymmreg*,ymmr256,ymmreg	AVX,SANDYBRIDGE
VBROADCASTSS	xmmreg,mem32	AVX,SANDYBRIDGE
VBROADCASTSS	ymmreg,mem32	AVX,SANDYBRIDGE
VBROADCASTSD	ymmreg,mem64	AVX,SANDYBRIDGE
VBROADCASTF128	ymmreg,mem128	AVX,SANDYBRIDGE
VCMPEQ_OSPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPEQ_OSPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPEQPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPEQPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMLT_OSPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMLT_OSPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMLTPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMLTPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPLE_OSPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPLE_OSPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPLEPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPLEPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPUNORD_QPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPUNORD_QPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPUNORDPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPUNORDPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNEQ_UQPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNEQ_UQPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNEQPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNEQPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNLT_USPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNLT_USPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNLTDP	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNLTDP	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNLE_USPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNLE_USPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNLEPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNLEPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPORD_QPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPORD_QPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPORDPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPORDPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPEQ_UQPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPEQ_UQPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNGE_USPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNGE_USPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNGEPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNGEPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNGT_USPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNGT_USPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNGTPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNGTPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPFALSE_OQPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPFALSE_OQPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPFALSEPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPFALSEPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNEQ_OQPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNEQ_OQPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPGE_OSPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPGE_OSPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPGEPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPGEPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPGT_OSPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPGT_OSPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPGTPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE

VCMPGTPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPTRUE_UQPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPTRUE_UQPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPTRUEPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPTRUEPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPEQ_OSPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPEQ_OSPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPLT_OQPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPLT_OQPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPLE_OQPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPLE_OQPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPUNORD_SPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPUNORD_SPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPNEQ_USPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPNEQ_USPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPNLT_UQPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPNLT_UQPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPNLE_UQPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPNLE_UQPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPORD_SPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPORD_SPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPEQ_USPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPEQ_USPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPNGE_UQPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPNGE_UQPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPNGT_UQPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPNGT_UQPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPFALSE_OSPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPFALSE_OSPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPNEQ_OSPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPNEQ_OSPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPGE_OQPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPGE_OQPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPGT_OQPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPGT_OQPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPTRUE_USPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPTRUE_USPD	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPPD	xmmreg,xmmreg*,xmmrm128,ymm8	AVX,SANDYBRIDGE
VCMPPD	ymmreg,ymmreg*,xmmrm256,ymm8	AVX,SANDYBRIDGE
VCMPEQ_OSPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPEQ_OSPS	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPEQPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPEQPS	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPLT_OSPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPLT_OSPS	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPLTPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPLTPS	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPLE_OSPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPLE_OSPS	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPLEPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPLEPS	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPUNORD_QPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPUNORD_QPS	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPUNORDPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPUNORDPS	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPNEQ_UQPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPNEQ_UQPS	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPNEQPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VCMPNEQPS	ymmreg,ymmreg*,xmmrm256	AVX,SANDYBRIDGE
VCMPNLT_USPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE

VCMPNLT_USPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNLTPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNLTPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNLE_USPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNLE_USPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNLEPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNLEPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPORD_QPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPORD_QPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPORDPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPORDPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPEQ_UQPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPEQ_UQPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNGE_USPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNGE_USPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNGEPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNGEPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNGT_USPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNGT_USPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNGTPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNGTPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPFALSE_OQPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPFALSE_OQPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPFALSEPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPFALSEPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNEQ_OQPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNEQ_OQPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPGE_OSPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPGE_OSPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPGEPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPGEPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPGT_OSPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPGT_OSPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPGTPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPGTPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPTRUE_UQPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPTRUE_UQPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPTRUEPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPTRUEPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPEQ_OSPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPEQ_OSPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPLT_OQPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPLT_OQPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPLE_OQPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPLE_OQPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPUNORD_SPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPUNORD_SPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNEQ_USPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNEQ_USPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNLT_UQPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNLT_UQPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNLE_UQPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNLE_UQPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPORD_SPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPORD_SPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPEQ_USPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPEQ_USPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNGE_UQPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VCMPNGE_UQPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNGT_UQPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE

VCMPNGT_UQPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPFALSE_OSPS	xmmreg,xmmreg*,xmmr128	AVX,SANDYBRIDGE
VCMPFALSE_OSPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPNEQ_OSPS	xmmreg,xmmreg*,xmmr128	AVX,SANDYBRIDGE
VCMPNEQ_OSPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPGE_OQPS	xmmreg,xmmreg*,xmmr128	AVX,SANDYBRIDGE
VCMPGE_OQPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPGT_OQPS	xmmreg,xmmreg*,xmmr128	AVX,SANDYBRIDGE
VCMPGT_OQPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPTRUE_USPS	xmmreg,xmmreg*,xmmr128	AVX,SANDYBRIDGE
VCMPTRUE_USPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VCMPPS	xmmreg,xmmreg*,xmmr128,imm8	AVX,SANDYBRIDGE
VCMPPS	ymmreg,ymmreg*,ymmr256,imm8	AVX,SANDYBRIDGE
VCMPEQ_OSSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPEQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMLT_OSSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMLTSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPLE_OSSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPLESD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPUNORD_QSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPUNORDSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNEQ_UQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNEQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNLT_USSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNLTSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNLE_USSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNLESD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPORD_QSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPORDSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPEQ_UQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNGE_USSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNGESD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNGT_USSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNGTSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPFALSE_OQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPFALSESD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNEQ_OQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPGE_OSSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPGESD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPGT_OSSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPGTSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPTRUE_UQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPTRUESD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPEQ_OSSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMLT_OQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPLE_OQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPUNORD_SSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNEQ_USSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNLT_UQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNLE_UQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPORD_SSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPEQ_USSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNGE_UQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNGT_UQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPFALSE_OSSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPNEQ_OSSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPGE_OQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPGT_OQSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPTRUE_USSD	xmmreg,xmmreg*,xmmr64	AVX,SANDYBRIDGE
VCMPSD	xmmreg,xmmreg*,xmmr64,imm8	AVX,SANDYBRIDGE

VCMPEQ_OSSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPEQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMLT_OSSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMLTSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPLE_OSSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPLESS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPUNORD_QSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPUNORDSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNEQ_UQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNEQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNLT_USSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNLTSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNLE_USSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNLESS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPORD_QSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPORDSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPEQ_UQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNGE_USSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNGESS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNGT_USSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNGTSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPFALSE_QQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPFALSESS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNEQ_OQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPGE_OSSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPGESS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPGT_OSSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPGTSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPTRUE_UQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPTRUESS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPEQ_OSSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMLT_OQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPLE_OQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPUNORD_SSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNEQ_USSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNLT_UQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNLE_UQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPORD_SSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPEQ_USSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNGE_UQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNGT_UQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPFALSE_OSSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPNEQ_OSSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPGE_OQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPGT_OQSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPTRUE_USSS	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VCMPSS	xmmreg,xmmreg*,xmrm64,imm8	AVX,SANDYBRIDGE
VCOMISD	xmmreg,xmrm64	AVX,SANDYBRIDGE
VCOMISS	xmmreg,xmrm32	AVX,SANDYBRIDGE
VCVTDQ2PD	xmmreg,xmrm64	AVX,SANDYBRIDGE
VCVTDQ2PD	ymmreg,xmrm128	AVX,SANDYBRIDGE
VCVTDQ2PS	xmmreg,xmrm128	AVX,SANDYBRIDGE
VCVTDQ2PS	ymmreg,ymmrm256	AVX,SANDYBRIDGE
VCVTPD2DQ	xmmreg,xmmreg	AVX,SANDYBRIDGE
VCVTPD2DQ	xmmreg,mem128	AVX,SANDYBRIDGE,SO
VCVTPD2DQ	xmmreg,ymmreg	AVX,SANDYBRIDGE
VCVTPD2DQ	xmmreg,mem256	AVX,SANDYBRIDGE,SY
VCVTPD2PS	xmmreg,xmmreg	AVX,SANDYBRIDGE
VCVTPD2PS	xmmreg,mem128	AVX,SANDYBRIDGE,SO
VCVTPD2PS	xmmreg,ymmreg	AVX,SANDYBRIDGE

VCVTPD2PS	xmmreg,mem256	AVX,SANDYBRIDGE,SY
VCVTPS2DQ	xmmreg,xmmrm128	AVX,SANDYBRIDGE
VCVTPS2DQ	ymmreg,ymmrm256	AVX,SANDYBRIDGE
VCVTPS2PD	xmmreg,xmmrm64	AVX,SANDYBRIDGE
VCVTPS2PD	ymmreg,xmmrm128	AVX,SANDYBRIDGE
VCVTSD2SI	reg32,xmmrm64	AVX,SANDYBRIDGE
VCVTSD2SI	reg64,xmmrm64	AVX,SANDYBRIDGE, LONG
VCVTSD2SS	xmmreg,xmmreg*,xmmrm64	AVX,SANDYBRIDGE
VCVTSI2SD	xmmreg,xmmreg*,rm32	AVX,SANDYBRIDGE,SD
VCVTSI2SD	xmmreg,xmmreg*,mem32	AVX,SANDYBRIDGE,ND,SD
VCVTSI2SD	xmmreg,xmmreg*,rm64	AVX,SANDYBRIDGE, LONG
VCVTSI2SS	xmmreg,xmmreg*,rm32	AVX,SANDYBRIDGE,SD
VCVTSI2SS	xmmreg,xmmreg*,mem32	AVX,SANDYBRIDGE,ND,SD
VCVTSI2SS	xmmreg,xmmreg*,rm64	AVX,SANDYBRIDGE, LONG
VCVTSS2SD	xmmreg,xmmreg*,xmmrm32	AVX,SANDYBRIDGE
VCVTSS2SI	reg32,xmmrm32	AVX,SANDYBRIDGE
VCVTSS2SI	reg64,xmmrm32	AVX,SANDYBRIDGE, LONG
VCVTTPD2DQ	xmmreg,xmmreg	AVX,SANDYBRIDGE
VCVTTPD2DQ	xmmreg,mem128	AVX,SANDYBRIDGE,SO
VCVTTPD2DQ	xmmreg,ymmreg	AVX,SANDYBRIDGE
VCVTTPD2DQ	xmmreg,mem256	AVX,SANDYBRIDGE,SY
VCVTTPS2DQ	xmmreg,xmmrm128	AVX,SANDYBRIDGE
VCVTTPS2DQ	ymmreg,ymmrm256	AVX,SANDYBRIDGE
VCVTTS2SI	reg32,xmmrm64	AVX,SANDYBRIDGE
VCVTTS2SI	reg64,xmmrm64	AVX,SANDYBRIDGE, LONG
VCVTSS2SI	reg32,xmmrm32	AVX,SANDYBRIDGE
VCVTSS2SI	reg64,xmmrm32	AVX,SANDYBRIDGE, LONG
VDIVPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VDIVPD	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VDIVPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VDIVPS	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VDIVSD	xmmreg,xmmreg*,xmmrm64	AVX,SANDYBRIDGE
VDIVSS	xmmreg,xmmreg*,xmmrm32	AVX,SANDYBRIDGE
VDPPD	xmmreg,xmmreg*,xmmrm128,imm8	AVX,SANDYBRIDGE
VDPPS	xmmreg,xmmreg*,xmmrm128,imm8	AVX,SANDYBRIDGE
VDPPS	ymmreg,ymmreg*,ymmrm256,imm8	AVX,SANDYBRIDGE
VEXTRACTF128	xmmrm128,ymmreg,imm8	AVX,SANDYBRIDGE
VEXTRACTPS	rm32,xmmreg,imm8	AVX,SANDYBRIDGE
VHADDPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VHADDPD	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VHADDPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VHADDPD	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VHSDPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VHSDPD	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VHSDPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VHSDPS	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VINSERTF128	ymmreg,ymmreg*,xmmrm128,imm8	AVX,SANDYBRIDGE
VINSERTPS	xmmreg,xmmreg*,xmmrm32,imm8	AVX,SANDYBRIDGE
VLDQQU	xmmreg,mem128	AVX,SANDYBRIDGE
VLDQQU	ymmreg,mem256	AVX,SANDYBRIDGE
VLDQQU	ymmreg,mem256	AVX,SANDYBRIDGE
VLDMXCSR	mem32	AVX,SANDYBRIDGE
VMASKMOVDQU	xmmreg,xmmreg	AVX,SANDYBRIDGE
VMASKMOVPS	xmmreg,xmmreg,mem128	AVX,SANDYBRIDGE
VMASKMOVPS	ymmreg,ymmreg,mem256	AVX,SANDYBRIDGE
VMASKMOVPS	mem128,xmmreg,xmmreg	AVX,SANDYBRIDGE,SO
VMASKMOVPS	mem256,ymmreg,ymmreg	AVX,SANDYBRIDGE,SY
VMASKMOVPD	xmmreg,xmmreg,mem128	AVX,SANDYBRIDGE
VMASKMOVPD	ymmreg,ymmreg,mem256	AVX,SANDYBRIDGE
VMASKMOVPD	mem128,xmmreg,xmmreg	AVX,SANDYBRIDGE

VMASKMOVPD	mem256,ymmreg,ymmreg	AVX,SANDYBRIDGE
VMAXPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VMAXPD	ymmreg,ymmreg*,ymrm256	AVX,SANDYBRIDGE
VMAXPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VMAXPS	ymmreg,ymmreg*,ymrm256	AVX,SANDYBRIDGE
VMAXSD	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VMAXSS	xmmreg,xmmreg*,xmrm32	AVX,SANDYBRIDGE
VMINPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VMINPD	ymmreg,ymmreg*,ymrm256	AVX,SANDYBRIDGE
VMINPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VMINPS	ymmreg,ymmreg*,ymrm256	AVX,SANDYBRIDGE
VMINSD	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VMINSS	xmmreg,xmmreg*,xmrm32	AVX,SANDYBRIDGE
VMOVAPD	xmmreg,xmrm128	AVX,SANDYBRIDGE
VMOVAPD	xmrm128,xmmreg	AVX,SANDYBRIDGE
VMOVAPD	ymmreg,ymrm256	AVX,SANDYBRIDGE
VMOVAPD	ymrm256,ymmreg	AVX,SANDYBRIDGE
VMOVAPS	xmmreg,xmrm128	AVX,SANDYBRIDGE
VMOVAPS	xmrm128,xmmreg	AVX,SANDYBRIDGE
VMOVAPS	ymmreg,ymrm256	AVX,SANDYBRIDGE
VMOVAPS	ymrm256,ymmreg	AVX,SANDYBRIDGE
VMOVD	xmmreg,rm32	AVX,SANDYBRIDGE
VMOVD	rm32,xmmreg	AVX,SANDYBRIDGE
VMOVQ	xmmreg,xmrm64	AVX,SANDYBRIDGE
VMOVQ	xmrm64,xmmreg	AVX,SANDYBRIDGE
VMOVQ	xmmreg,rm64	AVX,SANDYBRIDGE, LONG
VMOVQ	rm64,xmmreg	AVX,SANDYBRIDGE, LONG
VMOVDDUP	xmmreg,xmrm64	AVX,SANDYBRIDGE
VMOVDDUP	ymmreg,ymrm256	AVX,SANDYBRIDGE
VMOVDQA	xmmreg,xmrm128	AVX,SANDYBRIDGE
VMOVDQA	xmrm128,xmmreg	AVX,SANDYBRIDGE
VMOVQQA	ymmreg,ymrm256	AVX,SANDYBRIDGE
VMOVQQA	ymrm256,ymmreg	AVX,SANDYBRIDGE
VMOVDQA	ymmreg,ymrm256	AVX,SANDYBRIDGE
VMOVDQA	ymrm256,ymmreg	AVX,SANDYBRIDGE
VMOVDQU	xmmreg,xmrm128	AVX,SANDYBRIDGE
VMOVDQU	xmrm128,xmmreg	AVX,SANDYBRIDGE
VMOVQQU	ymmreg,ymrm256	AVX,SANDYBRIDGE
VMOVQQU	ymrm256,ymmreg	AVX,SANDYBRIDGE
VMOVDQU	ymmreg,ymrm256	AVX,SANDYBRIDGE
VMOVDQU	ymrm256,ymmreg	AVX,SANDYBRIDGE
VMOVHLPD	xmmreg,xmmreg*,xmmreg	AVX,SANDYBRIDGE
VMOVHPD	xmmreg,xmmreg*,mem64	AVX,SANDYBRIDGE
VMOVHPD	mem64,xmmreg	AVX,SANDYBRIDGE
VMOVHPS	xmmreg,xmmreg*,mem64	AVX,SANDYBRIDGE
VMOVHPS	mem64,xmmreg	AVX,SANDYBRIDGE
VMOVLHPS	xmmreg,xmmreg*,xmmreg	AVX,SANDYBRIDGE
VMOVLPD	xmmreg,xmmreg*,mem64	AVX,SANDYBRIDGE
VMOVLPD	mem64,xmmreg	AVX,SANDYBRIDGE
VMOVLPS	xmmreg,xmmreg*,mem64	AVX,SANDYBRIDGE
VMOVLPS	mem64,xmmreg	AVX,SANDYBRIDGE
VMOVMSKPD	reg64,xmmreg	AVX,SANDYBRIDGE, LONG
VMOVMSKPD	reg32,xmmreg	AVX,SANDYBRIDGE
VMOVMSKPD	reg64,ymmreg	AVX,SANDYBRIDGE, LONG
VMOVMSKPD	reg32,ymmreg	AVX,SANDYBRIDGE
VMOVMSKPS	reg64,xmmreg	AVX,SANDYBRIDGE, LONG
VMOVMSKPS	reg32,xmmreg	AVX,SANDYBRIDGE
VMOVMSKPS	reg64,ymmreg	AVX,SANDYBRIDGE, LONG
VMOVMSKPS	reg32,ymmreg	AVX,SANDYBRIDGE
VMOVNTDQ	mem128,xmmreg	AVX,SANDYBRIDGE

VMOVNTQQ	mem256,ymmreg	AVX,SANDYBRIDGE
VMOVNTDQ	mem256,ymmreg	AVX,SANDYBRIDGE
VMOVNTDQA	xmmreg,mem128	AVX,SANDYBRIDGE
VMOVNTPD	mem128,xmmreg	AVX,SANDYBRIDGE
VMOVNTPD	mem256,ymmreg	AVX,SANDYBRIDGE
VMOVNTPS	mem128,xmmreg	AVX,SANDYBRIDGE
VMOVNTPS	mem256,ymmreg	AVX,SANDYBRIDGE
VMOVSD	xmmreg,xmmreg*,xmmreg	AVX,SANDYBRIDGE
VMOVSD	xmmreg,mem64	AVX,SANDYBRIDGE
VMOVSD	xmmreg,xmmreg*,xmmreg	AVX,SANDYBRIDGE
VMOVSD	mem64,xmmreg	AVX,SANDYBRIDGE
VMOVSHDUP	xmmreg,xmmrm128	AVX,SANDYBRIDGE
VMOVSHDUP	ymmreg,ymmr256	AVX,SANDYBRIDGE
VMOVSLDUP	xmmreg,xmmrm128	AVX,SANDYBRIDGE
VMOVSLDUP	ymmreg,ymmr256	AVX,SANDYBRIDGE
VMOVSS	xmmreg,xmmreg*,xmmreg	AVX,SANDYBRIDGE
VMOVSS	xmmreg,mem32	AVX,SANDYBRIDGE
VMOVSS	xmmreg,xmmreg*,xmmreg	AVX,SANDYBRIDGE
VMOVSS	mem32,xmmreg	AVX,SANDYBRIDGE
VMOVUPD	xmmreg,xmmrm128	AVX,SANDYBRIDGE
VMOVUPD	xmmrm128,xmmreg	AVX,SANDYBRIDGE
VMOVUPD	ymmreg,ymmr256	AVX,SANDYBRIDGE
VMOVUPD	ymmr256,ymmreg	AVX,SANDYBRIDGE
VMOVUPS	xmmreg,xmmrm128	AVX,SANDYBRIDGE
VMOVUPS	xmmrm128,xmmreg	AVX,SANDYBRIDGE
VMOVUPS	ymmreg,ymmr256	AVX,SANDYBRIDGE
VMOVUPS	ymmr256,ymmreg	AVX,SANDYBRIDGE
VMPSADBW	xmmreg,xmmreg*,xmmrm128,imm8	AVX,SANDYBRIDGE
VMULPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VMULPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VMULPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VMULPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VMULSD	xmmreg,xmmreg*,xmmrm64	AVX,SANDYBRIDGE
VMULSS	xmmreg,xmmreg*,xmmrm32	AVX,SANDYBRIDGE
VORPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VORPD	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VORPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VORPS	ymmreg,ymmreg*,ymmr256	AVX,SANDYBRIDGE
VPABSB	xmmreg,xmmrm128	AVX,SANDYBRIDGE
VPABSW	xmmreg,xmmrm128	AVX,SANDYBRIDGE
VPABSD	xmmreg,xmmrm128	AVX,SANDYBRIDGE
VPACKSSWB	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPACKSSDW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPACKUSWB	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPACKUSDW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPADDB	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPADDW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPADD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPADDQ	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPADDSB	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPADDSW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPADDUSB	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPADDUSW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPALIGNR	xmmreg,xmmreg*,xmmrm128,imm8	AVX,SANDYBRIDGE
VPAND	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPANDN	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPAVGB	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPAVGW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPBLENDVB	xmmreg,xmmreg*,xmmrm128,xmmreg	AVX,SANDYBRIDGE
VPBLENDW	xmmreg,xmmreg*,xmmrm128,imm8	AVX,SANDYBRIDGE

VPCMPESTRI	xmmreg,xmmrm128,imm8	AVX,SANDYBRIDGE
VPCMPESTRM	xmmreg,xmmrm128,imm8	AVX,SANDYBRIDGE
VPCMPISTRI	xmmreg,xmmrm128,imm8	AVX,SANDYBRIDGE
VPCMPISTRM	xmmreg,xmmrm128,imm8	AVX,SANDYBRIDGE
VPCMPEQB	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPCMPEQW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPCMPEQD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPCMPEQQ	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPCMPGTB	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPCMPGTW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPCMPGTD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPCMPGTQ	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPERMILPD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPERMILPD	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VPERMILPD	xmmreg,xmmrm128,imm8	AVX,SANDYBRIDGE
VPERMILPD	ymmreg,ymmrm256,imm8	AVX,SANDYBRIDGE
VPERMILPS	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPERMILPS	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VPERMILPS	xmmreg,xmmrm128,imm8	AVX,SANDYBRIDGE
VPERMILPS	ymmreg,ymmrm256,imm8	AVX,SANDYBRIDGE
VPERM2F128	ymmreg,ymmreg*,ymmrm256,imm8	AVX,SANDYBRIDGE
VPEXTRB	reg64,xmmreg,imm8	AVX,SANDYBRIDGE, LONG
VPEXTRB	reg32,xmmreg,imm8	AVX,SANDYBRIDGE
VPEXTRB	mem8,xmmreg,imm8	AVX,SANDYBRIDGE
VPEXTRW	reg64,xmmreg,imm8	AVX,SANDYBRIDGE, LONG
VPEXTRW	reg32,xmmreg,imm8	AVX,SANDYBRIDGE
VPEXTRW	reg64,xmmreg,imm8	AVX,SANDYBRIDGE, LONG
VPEXTRW	reg32,xmmreg,imm8	AVX,SANDYBRIDGE
VPEXTRW	mem16,xmmreg,imm8	AVX,SANDYBRIDGE
VPEXTRD	reg64,xmmreg,imm8	AVX,SANDYBRIDGE, LONG
VPEXTRD	rm32,xmmreg,imm8	AVX,SANDYBRIDGE
VPEXTRQ	rm64,xmmreg,imm8	AVX,SANDYBRIDGE, LONG
VPHADDW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPHADDD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPHADDSW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPHMINPOSUW	xmmreg,xmmrm128	AVX,SANDYBRIDGE
VPHSUBW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPHSUBD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPHSUBSW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPINSRB	xmmreg,xmmreg*,mem8,imm8	AVX,SANDYBRIDGE
VPINSRB	xmmreg,xmmreg*,rm8,imm8	AVX,SANDYBRIDGE
VPINSRB	xmmreg,xmmreg*,reg32,imm8	AVX,SANDYBRIDGE
VPINSRW	xmmreg,xmmreg*,mem16,imm8	AVX,SANDYBRIDGE
VPINSRW	xmmreg,xmmreg*,rm16,imm8	AVX,SANDYBRIDGE
VPINSRW	xmmreg,xmmreg*,reg32,imm8	AVX,SANDYBRIDGE
VPINSRD	xmmreg,xmmreg*,mem32,imm8	AVX,SANDYBRIDGE
VPINSRD	xmmreg,xmmreg*,rm32,imm8	AVX,SANDYBRIDGE
VPINSRQ	xmmreg,xmmreg*,mem64,imm8	AVX,SANDYBRIDGE, LONG
VPINSRQ	xmmreg,xmmreg*,rm64,imm8	AVX,SANDYBRIDGE, LONG
VPMADDWD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPMADDUBSW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPMAXSB	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPMAXSW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPMAXSD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPMAXUB	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPMAXUW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPMAXUD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPMINSB	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPMINSW	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE
VPMINSD	xmmreg,xmmreg*,xmmrm128	AVX,SANDYBRIDGE

VPMINUB	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPMINUW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPMINUD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPMOVMSKB	reg64,xmmreg	AVX,SANDYBRIDGE, LONG
VPMOVMSKB	reg32,xmmreg	AVX,SANDYBRIDGE
VPMOVSBXW	xmmreg,xmrm64	AVX,SANDYBRIDGE
VPMOVSBXD	xmmreg,xmrm32	AVX,SANDYBRIDGE
VPMOVSBXQ	xmmreg,xmrm16	AVX,SANDYBRIDGE
VPMOVSXWD	xmmreg,xmrm64	AVX,SANDYBRIDGE
VPMOVSXWQ	xmmreg,xmrm32	AVX,SANDYBRIDGE
VPMOVSDXQ	xmmreg,xmrm64	AVX,SANDYBRIDGE
VPMOVZXBW	xmmreg,xmrm64	AVX,SANDYBRIDGE
VPMOVZBXD	xmmreg,xmrm32	AVX,SANDYBRIDGE
VPMOVZXBQ	xmmreg,xmrm16	AVX,SANDYBRIDGE
VPMOVZXWD	xmmreg,xmrm64	AVX,SANDYBRIDGE
VPMOVZXWQ	xmmreg,xmrm32	AVX,SANDYBRIDGE
VPMOVZXDQ	xmmreg,xmrm64	AVX,SANDYBRIDGE
VPMULHUW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPMULHRW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPMULHW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPMULLW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPMULLD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPMULUDQ	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPMULDQ	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPOR	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSADBW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSHUFB	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSHUFQ	xmmreg,xmrm128,imm8	AVX,SANDYBRIDGE
VPSHUFHW	xmmreg,xmrm128,imm8	AVX,SANDYBRIDGE
VPSHUFQW	xmmreg,xmrm128,imm8	AVX,SANDYBRIDGE
VPSIGNB	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSIGNW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSIGND	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSLLDQ	xmmreg,xmmreg*,imm8	AVX,SANDYBRIDGE
VPSRLDQ	xmmreg,xmmreg*,imm8	AVX,SANDYBRIDGE
VPSLLW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSLLW	xmmreg,xmmreg*,imm8	AVX,SANDYBRIDGE
VPSLLD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSLLD	xmmreg,xmmreg*,imm8	AVX,SANDYBRIDGE
VPSLLQ	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSLLQ	xmmreg,xmmreg*,imm8	AVX,SANDYBRIDGE
VPSRAW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSRAW	xmmreg,xmmreg*,imm8	AVX,SANDYBRIDGE
VPSRAD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSRAD	xmmreg,xmmreg*,imm8	AVX,SANDYBRIDGE
VPSRLW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSRLW	xmmreg,xmmreg*,imm8	AVX,SANDYBRIDGE
VPSRLD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSRLD	xmmreg,xmmreg*,imm8	AVX,SANDYBRIDGE
VPSRLQ	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSRLQ	xmmreg,xmmreg*,imm8	AVX,SANDYBRIDGE
VPTEST	xmmreg,xmrm128	AVX,SANDYBRIDGE
VPTEST	ymmreg,ymrm256	AVX,SANDYBRIDGE
VPSUBB	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSUBW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSUBD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSUBQ	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSUBSB	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSUBSW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPSUBUSB	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE

VPSUBUSW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPUNPCKHBW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPUNPCKHWD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPUNPCKHDQ	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPUNPCKHQDQ	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPUNPCKLBW	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPUNPCKLWD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPUNPCKLDQ	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPUNPCKLQDQ	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VPXOR	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VRCPPS	xmmreg,xmrm128	AVX,SANDYBRIDGE
VRCPPS	ymmreg,ymmrm256	AVX,SANDYBRIDGE
VRCPS	xmmreg,xmmreg*,xmrm32	AVX,SANDYBRIDGE
VRSQRTPS	xmmreg,xmrm128	AVX,SANDYBRIDGE
VRSQRTPS	ymmreg,ymmrm256	AVX,SANDYBRIDGE
VRSQRTSS	xmmreg,xmmreg*,xmrm32	AVX,SANDYBRIDGE
VRoundPD	xmmreg,xmrm128,imm8	AVX,SANDYBRIDGE
VRoundPD	ymmreg,ymmrm256,imm8	AVX,SANDYBRIDGE
VRoundPS	xmmreg,xmrm128,imm8	AVX,SANDYBRIDGE
VRoundPS	ymmreg,ymmrm256,imm8	AVX,SANDYBRIDGE
VRoundSD	xmmreg,xmmreg*,xmrm64,imm8	AVX,SANDYBRIDGE
VRoundSS	xmmreg,xmmreg*,xmrm32,imm8	AVX,SANDYBRIDGE
VSHUFPD	xmmreg,xmmreg*,xmrm128,imm8	AVX,SANDYBRIDGE
VSHUFPD	ymmreg,ymmreg*,ymmrm256,imm8	AVX,SANDYBRIDGE
VSHUFPS	xmmreg,xmmreg*,xmrm128,imm8	AVX,SANDYBRIDGE
VSHUFPS	ymmreg,ymmreg*,ymmrm256,imm8	AVX,SANDYBRIDGE
VSQRTPD	xmmreg,xmrm128	AVX,SANDYBRIDGE
VSQRTPD	ymmreg,ymmrm256	AVX,SANDYBRIDGE
VSQRTPS	xmmreg,xmrm128	AVX,SANDYBRIDGE
VSQRTPS	ymmreg,ymmrm256	AVX,SANDYBRIDGE
VSQRTSD	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VSQRTSS	xmmreg,xmmreg*,xmrm32	AVX,SANDYBRIDGE
VSTMXCSR	mem32	AVX,SANDYBRIDGE
VSUBPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VSUBPD	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VSUBPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VSUBPS	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VSUBSD	xmmreg,xmmreg*,xmrm64	AVX,SANDYBRIDGE
VSUBSS	xmmreg,xmmreg*,xmrm32	AVX,SANDYBRIDGE
VTESTPS	xmmreg,xmrm128	AVX,SANDYBRIDGE
VTESTPS	ymmreg,ymmrm256	AVX,SANDYBRIDGE
VTESTPD	xmmreg,xmrm128	AVX,SANDYBRIDGE
VTESTPD	ymmreg,ymmrm256	AVX,SANDYBRIDGE
VUCOMISD	xmmreg,xmrm64	AVX,SANDYBRIDGE
VUCOMISS	xmmreg,xmrm32	AVX,SANDYBRIDGE
VUNPCKHPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VUNPCKHPD	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VUNPCKHPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VUNPCKHPS	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VUNPCKLPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VUNPCKLPD	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VUNPCKLPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VUNPCKLPS	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VXORPD	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VXORPD	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VXORPS	xmmreg,xmmreg*,xmrm128	AVX,SANDYBRIDGE
VXORPS	ymmreg,ymmreg*,ymmrm256	AVX,SANDYBRIDGE
VZEROALL		AVX,SANDYBRIDGE
VZERoupper		AVX,SANDYBRIDGE

B.1.27 Intel Carry-Less Multiplication instructions (CLMUL)

PCLMULLQLQDQ	xmmreg,xmmrm128	SSE, WESTMERE
PCLMULHQLQDQ	xmmreg,xmmrm128	SSE, WESTMERE
PCLMULLQHQQDQ	xmmreg,xmmrm128	SSE, WESTMERE
PCLMULHQHQQDQ	xmmreg,xmmrm128	SSE, WESTMERE
PCLMULQDQ	xmmreg,xmmrm128,imm8	SSE, WESTMERE

B.1.28 Intel AVX Carry-Less Multiplication instructions (CLMUL)

VPCLMULLQLQDQ	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VPCLMULHQLQDQ	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VPCLMULLQHQQDQ	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VPCLMULHQHQQDQ	xmmreg,xmmreg*,xmmrm128	AVX, SANDYBRIDGE
VPCLMULQDQ	xmmreg,xmmreg*,xmmrm128,imm8	AVX, SANDYBRIDGE
VPCLMULLQLQDQ	ymmreg,ymmreg*,ymmr256	VPCLMULQDQ
VPCLMULHQLQDQ	ymmreg,ymmreg*,ymmr256	VPCLMULQDQ
VPCLMULLQHQQDQ	ymmreg,ymmreg*,ymmr256	VPCLMULQDQ
VPCLMULHQHQQDQ	ymmreg,ymmreg*,ymmr256	VPCLMULQDQ
VPCLMULQDQ	ymmreg,ymmreg*,ymmr256,imm8	VPCLMULQDQ
VPCLMULLQLQDQ	xmmreg,xmmreg*,xmmrm128	AVX512VL, VPCLMULQDQ
VPCLMULHQLQDQ	xmmreg,xmmreg*,xmmrm128	AVX512VL, VPCLMULQDQ
VPCLMULLQHQQDQ	xmmreg,xmmreg*,xmmrm128	AVX512VL, VPCLMULQDQ
VPCLMULHQHQQDQ	xmmreg,xmmreg*,xmmrm128	AVX512VL, VPCLMULQDQ
VPCLMULQDQ	xmmreg,xmmreg*,xmmrm128,imm8	AVX512VL, VPCLMULQDQ
VPCLMULLQLQDQ	ymmreg,ymmreg*,ymmr256	AVX512VL, VPCLMULQDQ
VPCLMULHQLQDQ	ymmreg,ymmreg*,ymmr256	AVX512VL, VPCLMULQDQ
VPCLMULLQHQQDQ	ymmreg,ymmreg*,ymmr256	AVX512VL, VPCLMULQDQ
VPCLMULHQHQQDQ	ymmreg,ymmreg*,ymmr256	AVX512VL, VPCLMULQDQ
VPCLMULQDQ	ymmreg,ymmreg*,ymmr256,imm8	AVX512VL, VPCLMULQDQ
VPCLMULLQLQDQ	zmmreg,zmmreg*,zmmrm512	AVX512, VPCLMULQDQ
VPCLMULHQLQDQ	zmmreg,zmmreg*,zmmrm512	AVX512, VPCLMULQDQ
VPCLMULLQHQQDQ	zmmreg,zmmreg*,zmmrm512	AVX512, VPCLMULQDQ
VPCLMULHQHQQDQ	zmmreg,zmmreg*,zmmrm512	AVX512, VPCLMULQDQ
VPCLMULQDQ	zmmreg,zmmreg*,zmmrm512,imm8	AVX512, VPCLMULQDQ

B.1.29 Intel Fused Multiply-Add instructions (FMA)

VFMAADD132PS	xmmreg,xmmreg,xmmrm128	FMA
VFMAADD132PS	ymmreg,ymmreg,ymmr256	FMA
VFMAADD132PD	xmmreg,xmmreg,xmmrm128	FMA
VFMAADD132PD	ymmreg,ymmreg,ymmr256	FMA
VFMAADD312PS	xmmreg,xmmreg,xmmrm128	FMA
VFMAADD312PS	ymmreg,ymmreg,ymmr256	FMA
VFMAADD312PD	xmmreg,xmmreg,xmmrm128	FMA
VFMAADD312PD	ymmreg,ymmreg,ymmr256	FMA
VFMAADD213PS	xmmreg,xmmreg,xmmrm128	FMA
VFMAADD213PS	ymmreg,ymmreg,ymmr256	FMA
VFMAADD213PD	xmmreg,xmmreg,xmmrm128	FMA
VFMAADD213PD	ymmreg,ymmreg,ymmr256	FMA
VFMAADD123PS	xmmreg,xmmreg,xmmrm128	FMA
VFMAADD123PS	ymmreg,ymmreg,ymmr256	FMA
VFMAADD123PD	xmmreg,xmmreg,xmmrm128	FMA
VFMAADD123PD	ymmreg,ymmreg,ymmr256	FMA
VFMAADD231PS	xmmreg,xmmreg,xmmrm128	FMA
VFMAADD231PS	ymmreg,ymmreg,ymmr256	FMA
VFMAADD231PD	xmmreg,xmmreg,xmmrm128	FMA

VFMADD231PD	ymmreg,ymmreg,ymmrm256	FMA
VFMADD321PS	xmmreg,xmmreg,xmmrm128	FMA
VFMADD321PS	ymmreg,ymmreg,ymmrm256	FMA
VFMADD321PD	xmmreg,xmmreg,xmmrm128	FMA
VFMADD321PD	ymmreg,ymmreg,ymmrm256	FMA
VFMADDSUB132PS	xmmreg,xmmreg,xmmrm128	FMA
VFMADDSUB132PS	ymmreg,ymmreg,ymmrm256	FMA
VFMADDSUB132PD	xmmreg,xmmreg,xmmrm128	FMA
VFMADDSUB132PD	ymmreg,ymmreg,ymmrm256	FMA
VFMADDSUB312PS	xmmreg,xmmreg,xmmrm128	FMA
VFMADDSUB312PS	ymmreg,ymmreg,ymmrm256	FMA
VFMADDSUB312PD	xmmreg,xmmreg,xmmrm128	FMA
VFMADDSUB312PD	ymmreg,ymmreg,ymmrm256	FMA
VFMADDSUB213PS	xmmreg,xmmreg,xmmrm128	FMA
VFMADDSUB213PS	ymmreg,ymmreg,ymmrm256	FMA
VFMADDSUB213PD	xmmreg,xmmreg,xmmrm128	FMA
VFMADDSUB213PD	ymmreg,ymmreg,ymmrm256	FMA
VFMADDSUB123PS	xmmreg,xmmreg,xmmrm128	FMA
VFMADDSUB123PS	ymmreg,ymmreg,ymmrm256	FMA
VFMADDSUB123PD	xmmreg,xmmreg,xmmrm128	FMA
VFMADDSUB123PD	ymmreg,ymmreg,ymmrm256	FMA
VFMADDSUB231PS	xmmreg,xmmreg,xmmrm128	FMA
VFMADDSUB231PS	ymmreg,ymmreg,ymmrm256	FMA
VFMADDSUB231PD	xmmreg,xmmreg,xmmrm128	FMA
VFMADDSUB231PD	ymmreg,ymmreg,ymmrm256	FMA
VFMADDSUB321PS	xmmreg,xmmreg,xmmrm128	FMA
VFMADDSUB321PS	ymmreg,ymmreg,ymmrm256	FMA
VFMADDSUB321PD	xmmreg,xmmreg,xmmrm128	FMA
VFMADDSUB321PD	ymmreg,ymmreg,ymmrm256	FMA
VFMSUB132PS	xmmreg,xmmreg,xmmrm128	FMA
VFMSUB132PS	ymmreg,ymmreg,ymmrm256	FMA
VFMSUB132PD	xmmreg,xmmreg,xmmrm128	FMA
VFMSUB132PD	ymmreg,ymmreg,ymmrm256	FMA
VFMSUB312PS	xmmreg,xmmreg,xmmrm128	FMA
VFMSUB312PS	ymmreg,ymmreg,ymmrm256	FMA
VFMSUB312PD	xmmreg,xmmreg,xmmrm128	FMA
VFMSUB312PD	ymmreg,ymmreg,ymmrm256	FMA
VFMSUB213PS	xmmreg,xmmreg,xmmrm128	FMA
VFMSUB213PS	ymmreg,ymmreg,ymmrm256	FMA
VFMSUB213PD	xmmreg,xmmreg,xmmrm128	FMA
VFMSUB213PD	ymmreg,ymmreg,ymmrm256	FMA
VFMSUB123PS	xmmreg,xmmreg,xmmrm128	FMA
VFMSUB123PS	ymmreg,ymmreg,ymmrm256	FMA
VFMSUB123PD	xmmreg,xmmreg,xmmrm128	FMA
VFMSUB123PD	ymmreg,ymmreg,ymmrm256	FMA
VFMSUB231PS	xmmreg,xmmreg,xmmrm128	FMA
VFMSUB231PS	ymmreg,ymmreg,ymmrm256	FMA
VFMSUB231PD	xmmreg,xmmreg,xmmrm128	FMA
VFMSUB231PD	ymmreg,ymmreg,ymmrm256	FMA
VFMSUB321PS	xmmreg,xmmreg,xmmrm128	FMA
VFMSUB321PS	ymmreg,ymmreg,ymmrm256	FMA
VFMSUB321PD	xmmreg,xmmreg,xmmrm128	FMA
VFMSUB321PD	ymmreg,ymmreg,ymmrm256	FMA
VFMSUBADD132PS	xmmreg,xmmreg,xmmrm128	FMA
VFMSUBADD132PS	ymmreg,ymmreg,ymmrm256	FMA
VFMSUBADD132PD	xmmreg,xmmreg,xmmrm128	FMA
VFMSUBADD132PD	ymmreg,ymmreg,ymmrm256	FMA
VFMSUBADD312PS	xmmreg,xmmreg,xmmrm128	FMA
VFMSUBADD312PS	ymmreg,ymmreg,ymmrm256	FMA
VFMSUBADD312PD	xmmreg,xmmreg,xmmrm128	FMA

VFMSUBADD312PD	ymmreg,ymmreg,ymmr256	FMA
VFMSUBADD213PS	xmmreg,xmmreg,xmmr128	FMA
VFMSUBADD213PS	ymmreg,ymmreg,ymmr256	FMA
VFMSUBADD213PD	xmmreg,xmmreg,xmmr128	FMA
VFMSUBADD213PD	ymmreg,ymmreg,ymmr256	FMA
VFMSUBADD123PS	xmmreg,xmmreg,xmmr128	FMA
VFMSUBADD123PS	ymmreg,ymmreg,ymmr256	FMA
VFMSUBADD123PD	xmmreg,xmmreg,xmmr128	FMA
VFMSUBADD123PD	ymmreg,ymmreg,ymmr256	FMA
VFMSUBADD231PS	xmmreg,xmmreg,xmmr128	FMA
VFMSUBADD231PS	ymmreg,ymmreg,ymmr256	FMA
VFMSUBADD231PD	xmmreg,xmmreg,xmmr128	FMA
VFMSUBADD231PD	ymmreg,ymmreg,ymmr256	FMA
VFMSUBADD321PS	xmmreg,xmmreg,xmmr128	FMA
VFMSUBADD321PS	ymmreg,ymmreg,ymmr256	FMA
VFMSUBADD321PD	xmmreg,xmmreg,xmmr128	FMA
VFMSUBADD321PD	ymmreg,ymmreg,ymmr256	FMA
VFNMADD132PS	xmmreg,xmmreg,xmmr128	FMA
VFNMADD132PS	ymmreg,ymmreg,ymmr256	FMA
VFNMADD132PD	xmmreg,xmmreg,xmmr128	FMA
VFNMADD132PD	ymmreg,ymmreg,ymmr256	FMA
VFNMADD312PS	xmmreg,xmmreg,xmmr128	FMA
VFNMADD312PS	ymmreg,ymmreg,ymmr256	FMA
VFNMADD312PD	xmmreg,xmmreg,xmmr128	FMA
VFNMADD312PD	ymmreg,ymmreg,ymmr256	FMA
VFNMADD213PS	xmmreg,xmmreg,xmmr128	FMA
VFNMADD213PS	ymmreg,ymmreg,ymmr256	FMA
VFNMADD213PD	xmmreg,xmmreg,xmmr128	FMA
VFNMADD213PD	ymmreg,ymmreg,ymmr256	FMA
VFNMADD123PS	xmmreg,xmmreg,xmmr128	FMA
VFNMADD123PS	ymmreg,ymmreg,ymmr256	FMA
VFNMADD123PD	xmmreg,xmmreg,xmmr128	FMA
VFNMADD123PD	ymmreg,ymmreg,ymmr256	FMA
VFNMADD231PS	xmmreg,xmmreg,xmmr128	FMA
VFNMADD231PS	ymmreg,ymmreg,ymmr256	FMA
VFNMADD231PD	xmmreg,xmmreg,xmmr128	FMA
VFNMADD231PD	ymmreg,ymmreg,ymmr256	FMA
VFNMADD321PS	xmmreg,xmmreg,xmmr128	FMA
VFNMADD321PS	ymmreg,ymmreg,ymmr256	FMA
VFNMADD321PD	xmmreg,xmmreg,xmmr128	FMA
VFNMADD321PD	ymmreg,ymmreg,ymmr256	FMA
VFNMSUB132PS	xmmreg,xmmreg,xmmr128	FMA
VFNMSUB132PS	ymmreg,ymmreg,ymmr256	FMA
VFNMSUB132PD	xmmreg,xmmreg,xmmr128	FMA
VFNMSUB132PD	ymmreg,ymmreg,ymmr256	FMA
VFNMSUB312PS	xmmreg,xmmreg,xmmr128	FMA
VFNMSUB312PS	ymmreg,ymmreg,ymmr256	FMA
VFNMSUB312PD	xmmreg,xmmreg,xmmr128	FMA
VFNMSUB312PD	ymmreg,ymmreg,ymmr256	FMA
VFNMSUB213PS	xmmreg,xmmreg,xmmr128	FMA
VFNMSUB213PS	ymmreg,ymmreg,ymmr256	FMA
VFNMSUB213PD	xmmreg,xmmreg,xmmr128	FMA
VFNMSUB213PD	ymmreg,ymmreg,ymmr256	FMA
VFNMSUB123PS	xmmreg,xmmreg,xmmr128	FMA
VFNMSUB123PS	ymmreg,ymmreg,ymmr256	FMA
VFNMSUB123PD	xmmreg,xmmreg,xmmr128	FMA
VFNMSUB123PD	ymmreg,ymmreg,ymmr256	FMA
VFNMSUB231PS	xmmreg,xmmreg,xmmr128	FMA
VFNMSUB231PS	ymmreg,ymmreg,ymmr256	FMA
VFNMSUB231PD	xmmreg,xmmreg,xmmr128	FMA

VFNMSUB231PD	ymmreg,ymmreg,ymmrm256	FMA
VFNMSUB321PS	xmmreg,xmmreg,xmmrm128	FMA
VFNMSUB321PS	ymmreg,ymmreg,ymmrm256	FMA
VFNMSUB321PD	xmmreg,xmmreg,xmmrm128	FMA
VFNMSUB321PD	ymmreg,ymmreg,ymmrm256	FMA
VFMADD132SS	xmmreg,xmmreg,xmmrm32	FMA
VFMADD132SD	xmmreg,xmmreg,xmmrm64	FMA
VFMADD312SS	xmmreg,xmmreg,xmmrm32	FMA
VFMADD312SD	xmmreg,xmmreg,xmmrm64	FMA
VFMADD213SS	xmmreg,xmmreg,xmmrm32	FMA
VFMADD213SD	xmmreg,xmmreg,xmmrm64	FMA
VFMADD123SS	xmmreg,xmmreg,xmmrm32	FMA
VFMADD123SD	xmmreg,xmmreg,xmmrm64	FMA
VFMADD231SS	xmmreg,xmmreg,xmmrm32	FMA
VFMADD231SD	xmmreg,xmmreg,xmmrm64	FMA
VFMADD321SS	xmmreg,xmmreg,xmmrm32	FMA
VFMADD321SD	xmmreg,xmmreg,xmmrm64	FMA
VFMSUB132SS	xmmreg,xmmreg,xmmrm32	FMA
VFMSUB132SD	xmmreg,xmmreg,xmmrm64	FMA
VFMSUB312SS	xmmreg,xmmreg,xmmrm32	FMA
VFMSUB312SD	xmmreg,xmmreg,xmmrm64	FMA
VFMSUB213SS	xmmreg,xmmreg,xmmrm32	FMA
VFMSUB213SD	xmmreg,xmmreg,xmmrm64	FMA
VFMSUB123SS	xmmreg,xmmreg,xmmrm32	FMA
VFMSUB123SD	xmmreg,xmmreg,xmmrm64	FMA
VFMSUB231SS	xmmreg,xmmreg,xmmrm32	FMA
VFMSUB231SD	xmmreg,xmmreg,xmmrm64	FMA
VFMSUB321SS	xmmreg,xmmreg,xmmrm32	FMA
VFMSUB321SD	xmmreg,xmmreg,xmmrm64	FMA
VFNMADD132SS	xmmreg,xmmreg,xmmrm32	FMA
VFNMADD132SD	xmmreg,xmmreg,xmmrm64	FMA
VFNMADD312SS	xmmreg,xmmreg,xmmrm32	FMA
VFNMADD312SD	xmmreg,xmmreg,xmmrm64	FMA
VFNMADD213SS	xmmreg,xmmreg,xmmrm32	FMA
VFNMADD213SD	xmmreg,xmmreg,xmmrm64	FMA
VFNMADD123SS	xmmreg,xmmreg,xmmrm32	FMA
VFNMADD123SD	xmmreg,xmmreg,xmmrm64	FMA
VFNMADD231SS	xmmreg,xmmreg,xmmrm32	FMA
VFNMADD231SD	xmmreg,xmmreg,xmmrm64	FMA
VFNMADD321SS	xmmreg,xmmreg,xmmrm32	FMA
VFNMADD321SD	xmmreg,xmmreg,xmmrm64	FMA
VFNMSUB132SS	xmmreg,xmmreg,xmmrm32	FMA
VFNMSUB132SD	xmmreg,xmmreg,xmmrm64	FMA
VFNMSUB312SS	xmmreg,xmmreg,xmmrm32	FMA
VFNMSUB312SD	xmmreg,xmmreg,xmmrm64	FMA
VFNMSUB213SS	xmmreg,xmmreg,xmmrm32	FMA
VFNMSUB213SD	xmmreg,xmmreg,xmmrm64	FMA
VFNMSUB123SS	xmmreg,xmmreg,xmmrm32	FMA
VFNMSUB123SD	xmmreg,xmmreg,xmmrm64	FMA
VFNMSUB231SS	xmmreg,xmmreg,xmmrm32	FMA
VFNMSUB231SD	xmmreg,xmmreg,xmmrm64	FMA
VFNMSUB321SS	xmmreg,xmmreg,xmmrm32	FMA
VFNMSUB321SD	xmmreg,xmmreg,xmmrm64	FMA

B.1.30 Intel post-32 nm processor instructions

RDFSBASE	reg32	LONG
RDFSBASE	reg64	LONG
RDGSBASE	reg32	LONG

RDGSBASE	reg64	LONG
RDRAND	reg16	
RDRAND	reg32	
RDRAND	reg64	LONG
WRFSBASE	reg32	LONG
WRFSBASE	reg64	LONG
WRGSBASE	reg32	LONG
WRGSBASE	reg64	LONG
VCVTPH2PS	ymmreg,xmmrm128	AVX
VCVTPH2PS	xmmreg,xmmrm64	AVX
VCVTPS2PH	xmmrm128,ymmreg,imm8	AVX
VCVTPS2PH	xmmrm64,xmmreg,imm8	AVX
ADCX	reg32,rm32	
ADCX	reg64,rm64	LONG
ADOX	reg32,rm32	
ADOX	reg64,rm64	LONG
RDSEED	reg16	
RDSEED	reg32	
RDSEED	reg64	LONG
CLAC		PRIV
STAC		PRIV

B.1.31 VIA (Centaur) security instructions

XSTORE	PENT,CYRIX
XCRYPTECB	PENT,CYRIX
XCRYPTCBC	PENT,CYRIX
XCRYPTCTR	PENT,CYRIX
XCRYPTCFB	PENT,CYRIX
XCRYPTOFB	PENT,CYRIX
MONTMUL	PENT,CYRIX
XSHA1	PENT,CYRIX
XSHA256	PENT,CYRIX

B.1.32 AMD Lightweight Profiling (LWP) instructions

LLWPCB	reg32	AMD,386
LLWPCB	reg64	AMD,X86_64, LONG
SLWPCB	reg32	AMD,386
SLWPCB	reg64	AMD,X86_64, LONG
LWPVAL	reg32,rm32,imm32	AMD,386
LWPVAL	reg64,rm32,imm32	AMD,X86_64, LONG
LWPINS	reg32,rm32,imm32	AMD,386
LWPINS	reg64,rm32,imm32	AMD,X86_64, LONG

B.1.33 AMD XOP and FMA4 instructions (SSE5)

VFMADDPD	xmmreg,xmmreg*,xmmrm128,xmmreg	AMD,SSE5
VFMADDPD	ymmreg,ymmreg*,ymmrm256,ymmreg	AMD,SSE5
VFMADDPD	xmmreg,xmmreg*,xmmreg,xmmrm128	AMD,SSE5
VFMADDPD	ymmreg,ymmreg*,ymmreg,ymmrm256	AMD,SSE5
VFMADDPD	xmmreg,xmmreg*,xmmrm128,xmmreg	AMD,SSE5
VFMADDPD	ymmreg,ymmreg*,ymmrm256,ymmreg	AMD,SSE5
VFMADDPD	xmmreg,xmmreg*,xmmreg,xmmrm128	AMD,SSE5
VFMADDPD	ymmreg,ymmreg*,ymmreg,ymmrm256	AMD,SSE5
VFMADDSD	xmmreg,xmmreg*,xmmrm64,xmmreg	AMD,SSE5
VFMADDSD	xmmreg,xmmreg*,xmmreg,xmmrm64	AMD,SSE5

VFMADDSS	xmmreg,xmmreg*,xmrm32,xmmreg	AMD,SSE5
VFMADDSS	xmmreg,xmmreg*,xmmreg,xmrm32	AMD,SSE5
VFMADDSUBPD	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VFMADDSUBPD	ymmreg,ymmreg*,ymmrm256,ymmreg	AMD,SSE5
VFMADDSUBPD	xmmreg,xmmreg*,xmmreg,xmrm128	AMD,SSE5
VFMADDSUBPD	ymmreg,ymmreg*,ymmreg,ymmrm256	AMD,SSE5
VFMADDSUBPS	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VFMADDSUBPS	ymmreg,ymmreg*,ymmrm256,ymmreg	AMD,SSE5
VFMADDSUBPS	xmmreg,xmmreg*,xmmreg,xmrm128	AMD,SSE5
VFMADDSUBPS	ymmreg,ymmreg*,ymmreg,ymmrm256	AMD,SSE5
VFMADDSUBPS	xmmreg,xmmreg*,xmmreg,xmrm128	AMD,SSE5
VFMADDSUBPS	ymmreg,ymmreg*,ymmreg,ymmrm256	AMD,SSE5
VFMADDSUBPS	xmmreg,xmmreg*,xmmreg,xmrm128	AMD,SSE5
VFMADDSUBPS	ymmreg,ymmreg*,ymmreg,ymmrm256	AMD,SSE5
VFMADDSUBPS	xmmreg,xmmreg*,xmmreg,xmrm128	AMD,SSE5
VFMADDSUBPS	ymmreg,ymmreg*,ymmreg,ymmrm256	AMD,SSE5
VFMADDSD	xmmreg,xmmreg*,xmrm64,xmmreg	AMD,SSE5
VFMADDSD	xmmreg,xmmreg*,xmmreg,xmrm64	AMD,SSE5
VFMADDSS	xmmreg,xmmreg*,xmrm32,xmmreg	AMD,SSE5
VFMADDSS	xmmreg,xmmreg*,xmmreg,xmrm32	AMD,SSE5
VFNMADDPD	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VFNMADDPD	ymmreg,ymmreg*,ymmrm256,ymmreg	AMD,SSE5
VFNMADDPD	xmmreg,xmmreg*,xmmreg,xmrm128	AMD,SSE5
VFNMADDPD	ymmreg,ymmreg*,ymmreg,ymmrm256	AMD,SSE5
VFNMADDPS	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VFNMADDPS	ymmreg,ymmreg*,ymmrm256,ymmreg	AMD,SSE5
VFNMADDPS	xmmreg,xmmreg*,xmmreg,xmrm128	AMD,SSE5
VFNMADDPS	ymmreg,ymmreg*,ymmreg,ymmrm256	AMD,SSE5
VFNMADDSD	xmmreg,xmmreg*,xmrm64,xmmreg	AMD,SSE5
VFNMADDSD	xmmreg,xmmreg*,xmmreg,xmrm64	AMD,SSE5
VFNMADDSS	xmmreg,xmmreg*,xmrm32,xmmreg	AMD,SSE5
VFNMADDSS	xmmreg,xmmreg*,xmmreg,xmrm32	AMD,SSE5
VFNMSUBPD	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VFNMSUBPD	ymmreg,ymmreg*,ymmrm256,ymmreg	AMD,SSE5
VFNMSUBPD	xmmreg,xmmreg*,xmmreg,xmrm128	AMD,SSE5
VFNMSUBPD	ymmreg,ymmreg*,ymmreg,ymmrm256	AMD,SSE5
VFNMSUBPS	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VFNMSUBPS	ymmreg,ymmreg*,ymmrm256,ymmreg	AMD,SSE5
VFNMSUBPS	xmmreg,xmmreg*,xmmreg,xmrm128	AMD,SSE5
VFNMSUBPS	ymmreg,ymmreg*,ymmreg,ymmrm256	AMD,SSE5
VFNMSUBSD	xmmreg,xmmreg*,xmrm64,xmmreg	AMD,SSE5
VFNMSUBSD	xmmreg,xmmreg*,xmmreg,xmrm64	AMD,SSE5
VFNMSUBSS	xmmreg,xmmreg*,xmrm32,xmmreg	AMD,SSE5
VFNMSUBSS	xmmreg,xmmreg*,xmmreg,xmrm32	AMD,SSE5
VFRCZPD	xmmreg,xmrm128*	AMD,SSE5
VFRCZPD	ymmreg,ymmrm256*	AMD,SSE5
VFRCZPS	xmmreg,xmrm128*	AMD,SSE5
VFRCZPS	ymmreg,ymmrm256*	AMD,SSE5
VFRCZSD	xmmreg,xmrm64*	AMD,SSE5
VFRCZSS	xmmreg,xmrm32*	AMD,SSE5

VPCMOV	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPCMOV	ymmreg,ymmreg*,ymrm256,ymmreg	AMD,SSE5
VPCMOV	xmmreg,xmmreg*,xmmreg,xmrm128	AMD,SSE5
VPCMOV	ymmreg,ymmreg*,ymmreg,ymrm256	AMD,SSE5
VPCOMB	xmmreg,xmmreg*,xmrm128,imm8	AMD,SSE5
VPCOMD	xmmreg,xmmreg*,xmrm128,imm8	AMD,SSE5
VPCOMQ	xmmreg,xmmreg*,xmrm128,imm8	AMD,SSE5
VPCOMUB	xmmreg,xmmreg*,xmrm128,imm8	AMD,SSE5
VPCOMUD	xmmreg,xmmreg*,xmrm128,imm8	AMD,SSE5
VPCOMUQ	xmmreg,xmmreg*,xmrm128,imm8	AMD,SSE5
VPCOMUW	xmmreg,xmmreg*,xmrm128,imm8	AMD,SSE5
VPCOMW	xmmreg,xmmreg*,xmrm128,imm8	AMD,SSE5
VPHADDBD	xmmreg,xmrm128*	AMD,SSE5
VPHADDBQ	xmmreg,xmrm128*	AMD,SSE5
VPHADDBW	xmmreg,xmrm128*	AMD,SSE5
VPHADDQ	xmmreg,xmrm128*	AMD,SSE5
VPHADDUBD	xmmreg,xmrm128*	AMD,SSE5
VPHADDUBQ	xmmreg,xmrm128*	AMD,SSE5
VPHADDUBW	xmmreg,xmrm128*	AMD,SSE5
VPHADDUDQ	xmmreg,xmrm128*	AMD,SSE5
VPHADDUWD	xmmreg,xmrm128*	AMD,SSE5
VPHADDUWQ	xmmreg,xmrm128*	AMD,SSE5
VPHADDWD	xmmreg,xmrm128*	AMD,SSE5
VPHADDWQ	xmmreg,xmrm128*	AMD,SSE5
VPHSUBBW	xmmreg,xmrm128*	AMD,SSE5
VPHSUBDQ	xmmreg,xmrm128*	AMD,SSE5
VPHSUBWD	xmmreg,xmrm128*	AMD,SSE5
VPMACSD	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPMACSDQH	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPMACSDQL	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPMACSSD	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPMACSSDQH	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPMACSSDQL	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPMACSSWD	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPMACSSWW	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPMACSWD	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPMACSWW	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPMADCSWD	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPMADCSWD	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPPERM	xmmreg,xmmreg*,xmmreg,xmrm128	AMD,SSE5
VPPERM	xmmreg,xmmreg*,xmrm128,xmmreg	AMD,SSE5
VPROTB	xmmreg,xmrm128*,xmmreg	AMD,SSE5
VPROTB	xmmreg,xmmreg*,xmrm128	AMD,SSE5
VPROTB	xmmreg,xmrm128*,imm8	AMD,SSE5
VPROTD	xmmreg,xmrm128*,xmmreg	AMD,SSE5
VPROTD	xmmreg,xmmreg*,xmrm128	AMD,SSE5
VPROTD	xmmreg,xmrm128*,imm8	AMD,SSE5
VPROTQ	xmmreg,xmrm128*,xmmreg	AMD,SSE5
VPROTQ	xmmreg,xmmreg*,xmrm128	AMD,SSE5
VPROTQ	xmmreg,xmrm128*,imm8	AMD,SSE5
VPROTW	xmmreg,xmrm128*,xmmreg	AMD,SSE5
VPROTW	xmmreg,xmmreg*,xmrm128	AMD,SSE5
VPROTW	xmmreg,xmrm128*,imm8	AMD,SSE5
VPSHAB	xmmreg,xmrm128*,xmmreg	AMD,SSE5
VPSHAB	xmmreg,xmmreg*,xmrm128	AMD,SSE5
VPSHAD	xmmreg,xmrm128*,xmmreg	AMD,SSE5
VPSHAD	xmmreg,xmmreg*,xmrm128	AMD,SSE5
VPSHAQ	xmmreg,xmrm128*,xmmreg	AMD,SSE5
VPSHAQ	xmmreg,xmmreg*,xmrm128	AMD,SSE5
VPSHAW	xmmreg,xmrm128*,xmmreg	AMD,SSE5

VPSHAW	xmmreg,xmmreg*,xmrm128	AMD,SSE5
VPSHLB	xmmreg,xmrm128*,xmmreg	AMD,SSE5
VPSHLB	xmmreg,xmmreg*,xmrm128	AMD,SSE5
VPSHLD	xmmreg,xmrm128*,xmmreg	AMD,SSE5
VPSHLD	xmmreg,xmmreg*,xmrm128	AMD,SSE5
VPSHLQ	xmmreg,xmrm128*,xmmreg	AMD,SSE5
VPSHLQ	xmmreg,xmmreg*,xmrm128	AMD,SSE5
VPSHLW	xmmreg,xmrm128*,xmmreg	AMD,SSE5
VPSHLW	xmmreg,xmmreg*,xmrm128	AMD,SSE5

B.1.34 Intel AVX2 instructions

VMPSADBW	ymmreg,ymmreg*,ymrm256,imm8	AVX2
VPABSB	ymmreg,ymrm256	AVX2
VPABSW	ymmreg,ymrm256	AVX2
VPABSD	ymmreg,ymrm256	AVX2
VPACKSSWB	ymmreg,ymmreg*,ymrm256	AVX2
VPACKSSDW	ymmreg,ymmreg*,ymrm256	AVX2
VPACKUSDW	ymmreg,ymmreg*,ymrm256	AVX2
VPACKUSWB	ymmreg,ymmreg*,ymrm256	AVX2
VPADDB	ymmreg,ymmreg*,ymrm256	AVX2
VPADDW	ymmreg,ymmreg*,ymrm256	AVX2
VPADD	ymmreg,ymmreg*,ymrm256	AVX2
VPADDQ	ymmreg,ymmreg*,ymrm256	AVX2
VPADDSB	ymmreg,ymmreg*,ymrm256	AVX2
VPADDSW	ymmreg,ymmreg*,ymrm256	AVX2
VPADDUSB	ymmreg,ymmreg*,ymrm256	AVX2
VPADDUSW	ymmreg,ymmreg*,ymrm256	AVX2
VPALIGNR	ymmreg,ymmreg*,ymrm256,imm8	AVX2
VPAND	ymmreg,ymmreg*,ymrm256	AVX2
VPANDN	ymmreg,ymmreg*,ymrm256	AVX2
VPAVGB	ymmreg,ymmreg*,ymrm256	AVX2
VPAVGW	ymmreg,ymmreg*,ymrm256	AVX2
VPBLENDVB	ymmreg,ymmreg*,ymrm256,ymmreg	AVX2
VPBLENDW	ymmreg,ymmreg*,ymrm256,imm8	AVX2
VPCMPEQB	ymmreg,ymmreg*,ymrm256	AVX2
VPCMPEQW	ymmreg,ymmreg*,ymrm256	AVX2
VPCMPEQD	ymmreg,ymmreg*,ymrm256	AVX2
VPCMPEQQ	ymmreg,ymmreg*,ymrm256	AVX2
VPMPGTB	ymmreg,ymmreg*,ymrm256	AVX2
VPMPGTW	ymmreg,ymmreg*,ymrm256	AVX2
VPMPGTD	ymmreg,ymmreg*,ymrm256	AVX2
VPMPGTQ	ymmreg,ymmreg*,ymrm256	AVX2
VPHADDW	ymmreg,ymmreg*,ymrm256	AVX2
VPHADD	ymmreg,ymmreg*,ymrm256	AVX2
VPHADDSW	ymmreg,ymmreg*,ymrm256	AVX2
VPHSUBW	ymmreg,ymmreg*,ymrm256	AVX2
VPHSUBD	ymmreg,ymmreg*,ymrm256	AVX2
VPHSUBSW	ymmreg,ymmreg*,ymrm256	AVX2
VPMADDUSBW	ymmreg,ymmreg*,ymrm256	AVX2
VPMADDWD	ymmreg,ymmreg*,ymrm256	AVX2
VPMASB	ymmreg,ymmreg*,ymrm256	AVX2
VPMASW	ymmreg,ymmreg*,ymrm256	AVX2
VPMASD	ymmreg,ymmreg*,ymrm256	AVX2
VPMASUB	ymmreg,ymmreg*,ymrm256	AVX2
VPMASUW	ymmreg,ymmreg*,ymrm256	AVX2
VPMASUD	ymmreg,ymmreg*,ymrm256	AVX2
VPMINSB	ymmreg,ymmreg*,ymrm256	AVX2
VPMINSW	ymmreg,ymmreg*,ymrm256	AVX2

VPMINSD	ymmreg,ymmreg*,ymmr256	AVX2
VPMINUB	ymmreg,ymmreg*,ymmr256	AVX2
VPMINUW	ymmreg,ymmreg*,ymmr256	AVX2
VPMINUD	ymmreg,ymmreg*,ymmr256	AVX2
VPMOVMSKB	reg32,ymmreg	AVX2
VPMOVMSKB	reg64,ymmreg	AVX2
VPMOVSWB	ymmreg,xmmr128	AVX2
VPMOVXBD	ymmreg,mem64	AVX2
VPMOVXBD	ymmreg,xmmreg	AVX2
VPMOVXBQ	ymmreg,mem32	AVX2
VPMOVXBQ	ymmreg,xmmreg	AVX2
VPMOVXWD	ymmreg,xmmr128	AVX2
VPMOVXWQ	ymmreg,mem64	AVX2
VPMOVXWQ	ymmreg,xmmreg	AVX2
VPMOVXDQ	ymmreg,xmmr128	AVX2
VPMOVZXB	ymmreg,xmmr128	AVX2
VPMOVZXB	ymmreg,mem64	AVX2
VPMOVZXB	ymmreg,xmmreg	AVX2
VPMOVZXBQ	ymmreg,mem32	AVX2
VPMOVZXBQ	ymmreg,xmmreg	AVX2
VPMOVZWD	ymmreg,xmmr128	AVX2
VPMOVZWQ	ymmreg,mem64	AVX2
VPMOVZWQ	ymmreg,xmmreg	AVX2
VPMOVZDQ	ymmreg,xmmr128	AVX2
VPMULDQ	ymmreg,ymmreg*,ymmr256	AVX2
VPMULHSW	ymmreg,ymmreg*,ymmr256	AVX2
VPMULHUW	ymmreg,ymmreg*,ymmr256	AVX2
VPMULHW	ymmreg,ymmreg*,ymmr256	AVX2
VPMULLW	ymmreg,ymmreg*,ymmr256	AVX2
VPMULLD	ymmreg,ymmreg*,ymmr256	AVX2
VPMULUDQ	ymmreg,ymmreg*,ymmr256	AVX2
VPOR	ymmreg,ymmreg*,ymmr256	AVX2
VPSADB	ymmreg,ymmreg*,ymmr256	AVX2
VPSHUF	ymmreg,ymmreg*,ymmr256	AVX2
VPSHUF	ymmreg,ymmr256,imm8	AVX2
VPSHUFH	ymmreg,ymmr256,imm8	AVX2
VPSHUF	ymmreg,ymmr256,imm8	AVX2
VPSIGNB	ymmreg,ymmreg*,ymmr256	AVX2
VPSIGNW	ymmreg,ymmreg*,ymmr256	AVX2
VPSIGND	ymmreg,ymmreg*,ymmr256	AVX2
VPSLLDQ	ymmreg,ymmreg*,imm8	AVX2
VPSLLW	ymmreg,ymmreg*,xmmr128	AVX2
VPSLLW	ymmreg,ymmreg*,imm8	AVX2
VPSLLD	ymmreg,ymmreg*,xmmr128	AVX2
VPSLLD	ymmreg,ymmreg*,imm8	AVX2
VPSLLQ	ymmreg,ymmreg*,xmmr128	AVX2
VPSLLQ	ymmreg,ymmreg*,imm8	AVX2
VPSRAW	ymmreg,ymmreg*,xmmr128	AVX2
VPSRAW	ymmreg,ymmreg*,imm8	AVX2
VPSRAD	ymmreg,ymmreg*,xmmr128	AVX2
VPSRAD	ymmreg,ymmreg*,imm8	AVX2
VPSRLDQ	ymmreg,ymmreg*,imm8	AVX2
VPSRLW	ymmreg,ymmreg*,xmmr128	AVX2
VPSRLW	ymmreg,ymmreg*,imm8	AVX2
VPSRLD	ymmreg,ymmreg*,xmmr128	AVX2
VPSRLD	ymmreg,ymmreg*,imm8	AVX2
VPSRLQ	ymmreg,ymmreg*,xmmr128	AVX2
VPSRLQ	ymmreg,ymmreg*,imm8	AVX2
VPSUBB	ymmreg,ymmreg*,ymmr256	AVX2
VPSUBW	ymmreg,ymmreg*,ymmr256	AVX2

VPSUBD	ymmreg,ymmreg*,ymmr256	AVX2
VPSUBQ	ymmreg,ymmreg*,ymmr256	AVX2
VPSUBSB	ymmreg,ymmreg*,ymmr256	AVX2
VPSUBSW	ymmreg,ymmreg*,ymmr256	AVX2
VPSUBUSB	ymmreg,ymmreg*,ymmr256	AVX2
VPSUBUSW	ymmreg,ymmreg*,ymmr256	AVX2
VPUNPCKHBW	ymmreg,ymmreg*,ymmr256	AVX2
VPUNPCKHWD	ymmreg,ymmreg*,ymmr256	AVX2
VPUNPCKHDQ	ymmreg,ymmreg*,ymmr256	AVX2
VPUNPCKHQDQ	ymmreg,ymmreg*,ymmr256	AVX2
VPUNPCKLBW	ymmreg,ymmreg*,ymmr256	AVX2
VPUNPCKLWD	ymmreg,ymmreg*,ymmr256	AVX2
VPUNPCKLDQ	ymmreg,ymmreg*,ymmr256	AVX2
VPUNPCKLQDQ	ymmreg,ymmreg*,ymmr256	AVX2
VPXOR	ymmreg,ymmreg*,ymmr256	AVX2
VMOVNTDQA	ymmreg,mem256	AVX2
VBROADCASTSS	xmmreg,xmmreg	AVX2
VBROADCASTSS	ymmreg,xmmreg	AVX2
VBROADCASTSD	ymmreg,xmmreg	AVX2
VBROADCASTI128	ymmreg,mem128	AVX2
VPBLENDQ	xmmreg,xmmreg*,xmmr128,imm8	AVX2
VPBLENDQ	ymmreg,ymmreg*,ymmr256,imm8	AVX2
VPBROADCASTB	xmmreg,mem8	AVX2
VPBROADCASTB	xmmreg,xmmreg	AVX2
VPBROADCASTB	ymmreg,mem8	AVX2
VPBROADCASTB	ymmreg,xmmreg	AVX2
VPBROADCASTW	xmmreg,mem16	AVX2
VPBROADCASTW	xmmreg,xmmreg	AVX2
VPBROADCASTW	ymmreg,mem16	AVX2
VPBROADCASTW	ymmreg,xmmreg	AVX2
VPBROADCASTD	xmmreg,mem32	AVX2
VPBROADCASTD	xmmreg,xmmreg	AVX2
VPBROADCASTD	ymmreg,mem32	AVX2
VPBROADCASTD	ymmreg,xmmreg	AVX2
VPBROADCASTQ	xmmreg,mem64	AVX2
VPBROADCASTQ	xmmreg,xmmreg	AVX2
VPBROADCASTQ	ymmreg,mem64	AVX2
VPBROADCASTQ	ymmreg,xmmreg	AVX2
PPERMD	ymmreg,ymmreg*,ymmr256	AVX2
PERMPD	ymmreg,ymmr256,imm8	AVX2
PERMPS	ymmreg,ymmreg*,ymmr256	AVX2
PERMQ	ymmreg,ymmr256,imm8	AVX2
PERM2I128	ymmreg,ymmreg*,ymmr256,imm8	AVX2
VEEXTRACTI128	xmmr128,ymmreg,imm8	AVX2
VINSERTI128	ymmreg,ymmreg*,xmmr128,imm8	AVX2
VPMASKMOVB	xmmreg,xmmreg*,mem128	AVX2
VPMASKMOVB	ymmreg,ymmreg*,mem256	AVX2
VPMASKMOVQ	xmmreg,xmmreg*,mem128	AVX2
VPMASKMOVQ	ymmreg,ymmreg*,mem256	AVX2
VPMASKMOVB	mem128,xmmreg*,xmmreg	AVX2
VPMASKMOVB	mem256,ymmreg*,ymmreg	AVX2
VPMASKMOVQ	mem128,xmmreg*,xmmreg	AVX2
VPMASKMOVQ	mem256,ymmreg*,ymmreg	AVX2
VPSLLVB	xmmreg,xmmreg*,xmmr128	AVX2
VPSLLVB	xmmreg,xmmreg*,xmmr128	AVX2
VPSLLVB	ymmreg,ymmreg*,ymmr256	AVX2
VPSLLVB	ymmreg,ymmreg*,ymmr256	AVX2
VPSRAVB	xmmreg,xmmreg*,xmmr128	AVX2
VPSRAVB	ymmreg,ymmreg*,ymmr256	AVX2
VPSRLVB	xmmreg,xmmreg*,xmmr128	AVX2

VPSRLVQ	xmmreg,xmmreg*,xmrm128	AVX2
VPSRLVD	ymmreg,ymmreg*,ymrm256	AVX2
VPSRLVQ	ymmreg,ymmreg*,ymrm256	AVX2
VGATHERDPD	xmmreg,xmem64,xmmreg	AVX2
VGATHERQPD	xmmreg,xmem64,xmmreg	AVX2
VGATHERDPD	ymmreg,xmem64,ymmreg	AVX2
VGATHERQPD	ymmreg,ymem64,ymmreg	AVX2
VGATHERDPS	xmmreg,xmem32,xmmreg	AVX2
VGATHERQPS	xmmreg,xmem32,xmmreg	AVX2
VGATHERDPS	ymmreg,ymem32,ymmreg	AVX2
VGATHERQPS	xmmreg,ymem32,xmmreg	AVX2
VPGATHERDD	xmmreg,xmem32,xmmreg	AVX2
VPGATHERQD	xmmreg,xmem32,xmmreg	AVX2
VPGATHERDD	ymmreg,ymem32,ymmreg	AVX2
VPGATHERQD	xmmreg,ymem32,xmmreg	AVX2
VPGATHERDQ	xmmreg,xmem64,xmmreg	AVX2
VPGATHERQQ	xmmreg,xmem64,xmmreg	AVX2
VPGATHERDQ	ymmreg,xmem64,ymmreg	AVX2
VPGATHERQQ	ymmreg,ymem64,ymmreg	AVX2

B.1.35 Intel Transactional Synchronization Extensions (TSX)

XABORT	imm	RTM
XABORT	imm8	RTM
XBEGIN	imm	RTM
XBEGIN	imm near	RTM,ND
XBEGIN	imm16	RTM,NOLONG
XBEGIN	imm16 near	RTM,NOLONG,ND
XBEGIN	imm32	RTM,NOLONG
XBEGIN	imm32 near	RTM,NOLONG,ND
XBEGIN	imm64	RTM, LONG
XBEGIN	imm64 near	RTM, LONG,ND
XEND		RTM
XTEST		HLE,RTM

B.1.36 Intel BMI1 and BMI2 instructions, AMD TBM instructions

ANDN	reg32,reg32,rm32	BMI1
ANDN	reg64,reg64,rm64	LONG,BMI1
BEXTR	reg32,rm32,reg32	BMI1
BEXTR	reg64,rm64,reg64	LONG,BMI1
BEXTR	reg32,rm32,imm32	TBM
BEXTR	reg64,rm64,imm32	LONG,TBM
BLCI	reg32,rm32	TBM
BLCI	reg64,rm64	LONG,TBM
BLCIC	reg32,rm32	TBM
BLCIC	reg64,rm64	LONG,TBM
BLSI	reg32,rm32	BMI1
BLSI	reg64,rm64	LONG,BMI1
BLSIC	reg32,rm32	TBM
BLSIC	reg64,rm64	LONG,TBM
BLCFILL	reg32,rm32	TBM
BLCFILL	reg64,rm64	LONG,TBM
BLSFILL	reg32,rm32	TBM
BLSFILL	reg64,rm64	LONG,TBM
BLCMSK	reg32,rm32	TBM
BLCMSK	reg64,rm64	LONG,TBM
BLSMSK	reg32,rm32	BMI1

BLSMSK	reg64,rm64	LONG,BMI1
BLSR	reg32,rm32	BMI1
BLSR	reg64,rm64	LONG,BMI1
BLCS	reg32,rm32	TBM
BLCS	reg64,rm64	LONG,TBM
BZHI	reg32,rm32,reg32	BMI2
BZHI	reg64,rm64,reg64	LONG,BMI2
MULX	reg32,reg32,rm32	BMI2
MULX	reg64,reg64,rm64	LONG,BMI2
PDEP	reg32,reg32,rm32	BMI2
PDEP	reg64,reg64,rm64	LONG,BMI2
PEXT	reg32,reg32,rm32	BMI2
PEXT	reg64,reg64,rm64	LONG,BMI2
RORX	reg32,rm32,imm8	BMI2
RORX	reg64,rm64,imm8	LONG,BMI2
SARX	reg32,rm32,reg32	BMI2
SARX	reg64,rm64,reg64	LONG,BMI2
SHLX	reg32,rm32,reg32	BMI2
SHLX	reg64,rm64,reg64	LONG,BMI2
SHRX	reg32,rm32,reg32	BMI2
SHRX	reg64,rm64,reg64	LONG,BMI2
TZCNT	reg16,rm16	BMI1
TZCNT	reg32,rm32	BMI1
TZCNT	reg64,rm64	LONG,BMI1
TZMSK	reg32,rm32	TBM
TZMSK	reg64,rm64	LONG,TBM
T1MSKC	reg32,rm32	TBM
T1MSKC	reg64,rm64	LONG,TBM
PREFETCHWT1	mem8	PREFETCHWT1

B.1.37 Intel Memory Protection Extensions (MPX)

BNDMK	bndreg,mem	MPX,MIB
BNDCL	bndreg,mem	MPX
BNDCL	bndreg,reg32	MPX,NOLONG
BNDCL	bndreg,reg64	MPX, LONG
BNDKU	bndreg,mem	MPX
BNDKU	bndreg,reg32	MPX,NOLONG
BNDKU	bndreg,reg64	MPX, LONG
BNDKN	bndreg,mem	MPX
BNDKN	bndreg,reg32	MPX,NOLONG
BNDKN	bndreg,reg64	MPX, LONG
BNDMOV	bndreg,bndreg	MPX
BNDMOV	bndreg,mem	MPX
BNDMOV	bndreg,bndreg	MPX
BNDMOV	mem,bndreg	MPX
BNDLDX	bndreg,mem	MPX,MIB
BNDLDX	bndreg,mem,reg32	MPX,MIB,NOLONG
BNDLDX	bndreg,mem,reg64	MPX,MIB, LONG
BNDSTX	mem,bndreg	MPX,MIB
BNDSTX	mem,reg32,bndreg	MPX,MIB,NOLONG
BNDSTX	mem,reg64,bndreg	MPX,MIB, LONG
BNDSTX	mem,bndreg,reg32	MPX,MIB,NOLONG
BNDSTX	mem,bndreg,reg64	MPX,MIB, LONG

B.1.38 Intel SHA acceleration instructions

SHA1MSG1	xmmreg,xmmrm128	SHA
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SHA1MSG2	xmmreg,xmmrm128	SHA
SHA1NEXTE	xmmreg,xmmrm128	SHA
SHA1RND\$4	xmmreg,xmmrm128,imm8	SHA
SHA256MSG1	xmmreg,xmmrm128	SHA
SHA256MSG2	xmmreg,xmmrm128	SHA
SHA256RND\$2	xmmreg,xmmrm128,xmm0	SHA
SHA256RND\$2	xmmreg,xmmrm128	SHA

B.1.39 AVX-512 mask register instructions

KADDB	kreg,kreg,kreg	
KADDD	kreg,kreg,kreg	
KADDQ	kreg,kreg,kreg	
KADDW	kreg,kreg,kreg	
KANDB	kreg,kreg,kreg	
KANDD	kreg,kreg,kreg	
KANDNB	kreg,kreg,kreg	
KANDND	kreg,kreg,kreg	
KANDNQ	kreg,kreg,kreg	
KANDNW	kreg,kreg,kreg	
KANDQ	kreg,kreg,kreg	
KANDW	kreg,kreg,kreg	
KMOVB	kreg,krm8	
KMOVB	mem8,kreg	
KMOVB	kreg,reg32	
KMOVB	kreg,reg8	ND
KMOVB	reg32,kreg	
KMOVD	kreg,krm32	
KMOVD	mem32,kreg	
KMOVD	kreg,reg32	
KMOVD	reg32,kreg	
KMOVQ	kreg,krm64	
KMOVQ	mem64,kreg	
KMOVQ	kreg,reg64	
KMOVQ	reg64,kreg	
KMOVW	kreg,krm16	
KMOVW	mem16,kreg	
KMOVW	kreg,reg32	
KMOVW	kreg,reg16	ND
KMOVW	reg32,kreg	
KNOTB	kreg,kreg	
KNOTD	kreg,kreg	
KNOTQ	kreg,kreg	
KNOTW	kreg,kreg	
KORB	kreg,kreg,kreg	
KORD	kreg,kreg,kreg	
KORQ	kreg,kreg,kreg	
KORW	kreg,kreg,kreg	
KORTESTB	kreg,kreg	
KORTESTD	kreg,kreg	
KORTESTQ	kreg,kreg	
KORTESTW	kreg,kreg	
KSHIFTLB	kreg,kreg,imm8	
KSHIFTLD	kreg,kreg,imm8	
KSHIFTLQ	kreg,kreg,imm8	
KSHIFTLW	kreg,kreg,imm8	
KSHIFTRB	kreg,kreg,imm8	
KSHIFTRD	kreg,kreg,imm8	
KSHIFTRQ	kreg,kreg,imm8	

KSHIFTRW	kreg,kreg,imm8
KTESTB	kreg,kreg
KTESTD	kreg,kreg
KTESTQ	kreg,kreg
KTESTW	kreg,kreg
KUNPCKBW	kreg,kreg,kreg
KUNPCKDQ	kreg,kreg,kreg
KUNPCKWD	kreg,kreg,kreg
KXNORB	kreg,kreg,kreg
KXNORD	kreg,kreg,kreg
KXNORQ	kreg,kreg,kreg
KXNORW	kreg,kreg,kreg
KXORB	kreg,kreg,kreg
KXORD	kreg,kreg,kreg
KXORQ	kreg,kreg,kreg
KXORW	kreg,kreg,kreg

B.1.40 AVX-512 mask register instructions (aliases requiring explicit size support)

KADD	kreg8,kreg,kreg	ND
KADD	kreg32,kreg,kreg	ND
KADD	kreg64,kreg,kreg	ND
KADD	kreg16,kreg,kreg	ND
KAND	kreg8,kreg,kreg	ND
KAND	kreg32,kreg,kreg	ND
KANDN	kreg64,kreg,kreg	ND
KANDN	kreg16,kreg,kreg	ND
KANDN	kreg8,kreg,kreg	ND
KANDN	kreg32,kreg,kreg	ND
KAND	kreg64,kreg,kreg	ND
KAND	kreg16,kreg,kreg	ND
KMOV	kreg8,krm8	ND
KMOV	mem8,kreg8	ND
KMOV	kreg8,reg32	ND,SX
KMOV	kreg8,reg8	ND
KMOV	reg32,kreg8	ND,SX
KMOV	kreg32,krm32	ND
KMOV	mem32,kreg32	ND
KMOV	kreg32,reg32	ND
KMOV	reg32,kreg32	ND
KMOV	kreg64,krm64	ND
KMOV	mem64,kreg64	ND
KMOV	kreg64,reg64	ND
KMOV	reg64,kreg64	ND
KMOV	kreg16,krm16	ND
KMOV	mem16,kreg16	ND
KMOV	kreg16,reg32	ND,SX
KMOV	reg32,kreg16	ND,SX
KMOV	kreg16,reg32	ND,SX
KMOV	kreg16,reg16	ND
KNOT	kreg8,kreg8	ND
KNOT	kreg32,kreg32	ND
KNOT	kreg64,kreg64	ND
KNOT	kreg16,kreg16	ND
KOR	kreg8,kreg,kreg	ND
KOR	kreg32,kreg,kreg	ND
KOR	kreg64,kreg,kreg	ND
KOR	kreg16,kreg,kreg	ND
KORTEST	kreg8,kreg	ND

KORTEST	kreg32,kreg	ND
KORTEST	kreg64,kreg	ND
KORTEST	kreg16,kreg	ND
KSHIFTL	kreg8,kreg,imm8	ND
KSHIFTL	kreg32,kreg,imm8	ND
KSHIFTL	kreg64,kreg,imm8	ND
KSHIFTL	kreg16,kreg,imm8	ND
KSHIFTR	kreg8,kreg,imm8	ND
KSHIFTR	kreg32,kreg,imm8	ND
KSHIFTR	kreg64,kreg,imm8	ND
KSHIFTR	kreg16,kreg,imm8	ND
KTEST	kreg8,kreg	ND
KTEST	kreg32,kreg	ND
KTEST	kreg64,kreg	ND
KTEST	kreg16,kreg	ND
KUNPCK	kreg16,kreg8,kreg8	ND
KUNPCK	kreg64,kreg32,kreg32	ND
KUNPCK	kreg32,kreg16,kreg16	ND
KXNOR	kreg8,kreg,kreg	ND
KXNOR	kreg32,kreg,kreg	ND
KXNOR	kreg64,kreg,kreg	ND
KXNOR	kreg16,kreg,kreg	ND
KXOR	kreg8,kreg,kreg	ND
KXOR	kreg32,kreg,kreg	ND
KXOR	kreg64,kreg,kreg	ND
KXOR	kreg16,kreg,kreg	ND

B.1.41 AVX-512 instructions

VADDPD	xmmreg mask z,xmmreg*,xmrm128 b64	AVX512VL
VADDPD	ymmreg mask z,ymmreg*,ymrm256 b64	AVX512VL
VADDPD	zmmreg mask z,zmmreg*,zmmrm512 b64 er	AVX512
VADDPD	xmmreg mask z,xmmreg*,xmrm128 b32	AVX512VL
VADDPD	ymmreg mask z,ymmreg*,ymrm256 b32	AVX512VL
VADDPD	zmmreg mask z,zmmreg*,zmmrm512 b32 er	AVX512
VADDSD	xmmreg mask z,xmmreg*,xmrm64 er	AVX512
VADDSS	xmmreg mask z,xmmreg*,xmrm32 er	AVX512
VALIGND	xmmreg mask z,xmmreg*,xmrm128 b32,imm8	AVX512VL
VALIGND	ymmreg mask z,ymmreg*,ymrm256 b32,imm8	AVX512VL
VALIGND	zmmreg mask z,zmmreg*,zmmrm512 b32,imm8	AVX512
VALIGNQ	xmmreg mask z,xmmreg*,xmrm128 b64,imm8	AVX512VL
VALIGNQ	ymmreg mask z,ymmreg*,ymrm256 b64,imm8	AVX512VL
VALIGNQ	zmmreg mask z,zmmreg*,zmmrm512 b64,imm8	AVX512
VANDNPD	xmmreg mask z,xmmreg*,xmrm128 b64	AVX512VL/DQ
VANDNPD	ymmreg mask z,ymmreg*,ymrm256 b64	AVX512VL/DQ
VANDNPD	zmmreg mask z,zmmreg*,zmmrm512 b64	AVX512DQ
VANDNPS	xmmreg mask z,xmmreg*,xmrm128 b32	AVX512VL/DQ
VANDNPS	ymmreg mask z,ymmreg*,ymrm256 b32	AVX512VL/DQ
VANDNPS	zmmreg mask z,zmmreg*,zmmrm512 b32	AVX512DQ
VANDPD	xmmreg mask z,xmmreg*,xmrm128 b64	AVX512VL/DQ
VANDPD	ymmreg mask z,ymmreg*,ymrm256 b64	AVX512VL/DQ
VANDPD	zmmreg mask z,zmmreg*,zmmrm512 b64	AVX512DQ
VANDPS	xmmreg mask z,xmmreg*,xmrm128 b32	AVX512VL/DQ
VANDPS	ymmreg mask z,ymmreg*,ymrm256 b32	AVX512VL/DQ
VANDPS	zmmreg mask z,zmmreg*,zmmrm512 b32	AVX512DQ
VBLENDMPD	xmmreg mask z,xmmreg,xmrm128 b64	AVX512VL
VBLENDMPD	ymmreg mask z,ymmreg,ymrm256 b64	AVX512VL
VBLENDMPD	zmmreg mask z,zmmreg,zmmrm512 b64	AVX512
VBLENDMPS	xmmreg mask z,xmmreg,xmrm128 b32	AVX512VL

VBLENDMPS	ymmreg mask z,ymmreg,ymmr256 b32	AVX512VL
VBLENDMPS	zmmreg mask z,zmmreg,zmmr512 b32	AVX512
VBROADCASTF32X2	ymmreg mask z,xmmr64	AVX512VL/DQ
VBROADCASTF32X2	zmmreg mask z,xmmr64	AVX512DQ
VBROADCASTF32X4	ymmreg mask z,mem128	AVX512VL
VBROADCASTF32X4	zmmreg mask z,mem128	AVX512
VBROADCASTF32X8	zmmreg mask z,mem256	AVX512DQ
VBROADCASTF64X2	ymmreg mask z,mem128	AVX512VL/DQ
VBROADCASTF64X2	zmmreg mask z,mem128	AVX512DQ
VBROADCASTF64X4	zmmreg mask z,mem256	AVX512
VBROADCASTI32X2	xmmreg mask z,xmmr64	AVX512VL/DQ
VBROADCASTI32X2	ymmreg mask z,xmmr64	AVX512VL/DQ
VBROADCASTI32X2	zmmreg mask z,xmmr64	AVX512DQ
VBROADCASTI32X4	ymmreg mask z,mem128	AVX512VL
VBROADCASTI32X4	zmmreg mask z,mem128	AVX512
VBROADCASTI32X8	zmmreg mask z,mem256	AVX512DQ
VBROADCASTI64X2	ymmreg mask z,mem128	AVX512VL/DQ
VBROADCASTI64X2	zmmreg mask z,mem128	AVX512DQ
VBROADCASTI64X4	zmmreg mask z,mem256	AVX512
VBROADCASTSD	ymmreg mask z,mem64	AVX512VL
VBROADCASTSD	zmmreg mask z,mem64	AVX512
VBROADCASTSD	ymmreg mask z,xmmreg	AVX512VL
VBROADCASTSD	zmmreg mask z,xmmreg	AVX512
VBROADCASTSS	xmmreg mask z,mem32	AVX512VL
VBROADCASTSS	ymmreg mask z,mem32	AVX512VL
VBROADCASTSS	zmmreg mask z,mem32	AVX512
VBROADCASTSS	xmmreg mask z,xmmreg	AVX512VL
VBROADCASTSS	ymmreg mask z,xmmreg	AVX512VL
VBROADCASTSS	zmmreg mask z,xmmreg	AVX512
VCMPEQPD	kreg mask,xmmreg,xmmr128 b64	AVX512VL
VCMPEQPD	kreg mask,ymmreg,ymmr256 b64	AVX512VL
VCMPEQPD	kreg mask,zmmreg,zmmr512 b64 sae	AVX512
VCMPEQPS	kreg mask,xmmreg,xmmr128 b32	AVX512VL
VCMPEQPS	kreg mask,ymmreg,ymmr256 b32	AVX512VL
VCMPEQPS	kreg mask,zmmreg,zmmr512 b32 sae	AVX512
VCMPEQSD	kreg mask,xmmreg,xmmr64 sae	AVX512
VCMPEQSS	kreg mask,xmmreg,xmmr32 sae	AVX512
VCMPEQ_OQPD	kreg mask,xmmreg,xmmr128 b64	AVX512VL
VCMPEQ_OQPD	kreg mask,ymmreg,ymmr256 b64	AVX512VL
VCMPEQ_OQPD	kreg mask,zmmreg,zmmr512 b64 sae	AVX512
VCMPEQ_OQPS	kreg mask,xmmreg,xmmr128 b32	AVX512VL
VCMPEQ_OQPS	kreg mask,ymmreg,ymmr256 b32	AVX512VL
VCMPEQ_OQPS	kreg mask,zmmreg,zmmr512 b32 sae	AVX512
VCMPEQ_OQSD	kreg mask,xmmreg,xmmr64 sae	AVX512
VCMPEQ_OQSS	kreg mask,xmmreg,xmmr32 sae	AVX512
VCMLTPD	kreg mask,xmmreg,xmmr128 b64	AVX512VL
VCMLTPD	kreg mask,ymmreg,ymmr256 b64	AVX512VL
VCMLTPD	kreg mask,zmmreg,zmmr512 b64 sae	AVX512
VCMLTPS	kreg mask,xmmreg,xmmr128 b32	AVX512VL
VCMLTPS	kreg mask,ymmreg,ymmr256 b32	AVX512VL
VCMLTPS	kreg mask,zmmreg,zmmr512 b32 sae	AVX512
VCMLTSD	kreg mask,xmmreg,xmmr64 sae	AVX512
VCMLTSS	kreg mask,xmmreg,xmmr32 sae	AVX512
VCMLT_OSPD	kreg mask,xmmreg,xmmr128 b64	AVX512VL
VCMLT_OSPD	kreg mask,ymmreg,ymmr256 b64	AVX512VL
VCMLT_OSPD	kreg mask,zmmreg,zmmr512 b64 sae	AVX512
VCMLT_OSPS	kreg mask,xmmreg,xmmr128 b32	AVX512VL
VCMLT_OSPS	kreg mask,ymmreg,ymmr256 b32	AVX512VL
VCMLT_OSPS	kreg mask,zmmreg,zmmr512 b32 sae	AVX512
VCMLT_OSSD	kreg mask,xmmreg,xmmr64 sae	AVX512

VCMPPLT_OSSS	kreg	mask,xmmreg,xmmrm32	sae AVX512
VCMPLEPD	kreg	mask,xmmreg,xmmrm128	b64 AVX512VL
VCMPLEPD	kreg	mask,ymmreg,ymmrm256	b64 AVX512VL
VCMPLEPD	kreg	mask,zmmreg,zmmrm512	b64 sae AVX512
VCMPLEPS	kreg	mask,xmmreg,xmmrm128	b32 AVX512VL
VCMPLEPS	kreg	mask,ymmreg,ymmrm256	b32 AVX512VL
VCMPLEPS	kreg	mask,zmmreg,zmmrm512	b32 sae AVX512
VCMPLESD	kreg	mask,xmmreg,xmmrm64	sae AVX512
VCMPLESS	kreg	mask,xmmreg,xmmrm32	sae AVX512
VCMPLE_OSPD	kreg	mask,xmmreg,xmmrm128	b64 AVX512VL
VCMPLE_OSPD	kreg	mask,ymmreg,ymmrm256	b64 AVX512VL
VCMPLE_OSPD	kreg	mask,zmmreg,zmmrm512	b64 sae AVX512
VCMPLE_OSPS	kreg	mask,xmmreg,xmmrm128	b32 AVX512VL
VCMPLE_OSPS	kreg	mask,ymmreg,ymmrm256	b32 AVX512VL
VCMPLE_OSPS	kreg	mask,zmmreg,zmmrm512	b32 sae AVX512
VCMPLE_OSSD	kreg	mask,xmmreg,xmmrm64	sae AVX512
VCMPLE_OSSS	kreg	mask,xmmreg,xmmrm32	sae AVX512
VCMPUNORDPD	kreg	mask,xmmreg,xmmrm128	b64 AVX512VL
VCMPUNORDPD	kreg	mask,ymmreg,ymmrm256	b64 AVX512VL
VCMPUNORDPD	kreg	mask,zmmreg,zmmrm512	b64 sae AVX512
VCMPUNORDPS	kreg	mask,xmmreg,xmmrm128	b32 AVX512VL
VCMPUNORDPS	kreg	mask,ymmreg,ymmrm256	b32 AVX512VL
VCMPUNORDPS	kreg	mask,zmmreg,zmmrm512	b32 sae AVX512
VCMPUNORDSD	kreg	mask,xmmreg,xmmrm64	sae AVX512
VCMPUNORDSS	kreg	mask,xmmreg,xmmrm32	sae AVX512
VCMPUNORD_QPD	kreg	mask,xmmreg,xmmrm128	b64 AVX512VL
VCMPUNORD_QPD	kreg	mask,ymmreg,ymmrm256	b64 AVX512VL
VCMPUNORD_QPD	kreg	mask,zmmreg,zmmrm512	b64 sae AVX512
VCMPUNORD_QPS	kreg	mask,xmmreg,xmmrm128	b32 AVX512VL
VCMPUNORD_QPS	kreg	mask,ymmreg,ymmrm256	b32 AVX512VL
VCMPUNORD_QPS	kreg	mask,zmmreg,zmmrm512	b32 sae AVX512
VCMPUNORD_QSD	kreg	mask,xmmreg,xmmrm64	sae AVX512
VCMPUNORD_QSS	kreg	mask,xmmreg,xmmrm32	sae AVX512
VCMPNEQPD	kreg	mask,xmmreg,xmmrm128	b64 AVX512VL
VCMPNEQPD	kreg	mask,ymmreg,ymmrm256	b64 AVX512VL
VCMPNEQPD	kreg	mask,zmmreg,zmmrm512	b64 sae AVX512
VCMPNEQPS	kreg	mask,xmmreg,xmmrm128	b32 AVX512VL
VCMPNEQPS	kreg	mask,ymmreg,ymmrm256	b32 AVX512VL
VCMPNEQPS	kreg	mask,zmmreg,zmmrm512	b32 sae AVX512
VCMPNEQSD	kreg	mask,xmmreg,xmmrm64	sae AVX512
VCMPNEQSS	kreg	mask,xmmreg,xmmrm32	sae AVX512
VCMPNEQ_UQPD	kreg	mask,xmmreg,xmmrm128	b64 AVX512VL
VCMPNEQ_UQPD	kreg	mask,ymmreg,ymmrm256	b64 AVX512VL
VCMPNEQ_UQPD	kreg	mask,zmmreg,zmmrm512	b64 sae AVX512
VCMPNEQ_UQPS	kreg	mask,xmmreg,xmmrm128	b32 AVX512VL
VCMPNEQ_UQPS	kreg	mask,ymmreg,ymmrm256	b32 AVX512VL
VCMPNEQ_UQPS	kreg	mask,zmmreg,zmmrm512	b32 sae AVX512
VCMPNEQ_UQSD	kreg	mask,xmmreg,xmmrm64	sae AVX512
VCMPNEQ_UQSS	kreg	mask,xmmreg,xmmrm32	sae AVX512
VCMPNLTPD	kreg	mask,xmmreg,xmmrm128	b64 AVX512VL
VCMPNLTPD	kreg	mask,ymmreg,ymmrm256	b64 AVX512VL
VCMPNLTPD	kreg	mask,zmmreg,zmmrm512	b64 sae AVX512
VCMPNLTPS	kreg	mask,xmmreg,xmmrm128	b32 AVX512VL
VCMPNLTPS	kreg	mask,ymmreg,ymmrm256	b32 AVX512VL
VCMPNLTPS	kreg	mask,zmmreg,zmmrm512	b32 sae AVX512
VCMPNLTSD	kreg	mask,xmmreg,xmmrm64	sae AVX512
VCMPNLTSS	kreg	mask,xmmreg,xmmrm32	sae AVX512
VCMPNLT_USPD	kreg	mask,xmmreg,xmmrm128	b64 AVX512VL
VCMPNLT_USPD	kreg	mask,ymmreg,ymmrm256	b64 AVX512VL
VCMPNLT_USPD	kreg	mask,zmmreg,zmmrm512	b64 sae AVX512

VCMPNLT_USPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPNLT_USPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPNLT_USPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPNLT_USSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPNLT_USSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPNLEPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPNLEPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPNLEPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPNLEPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPNLEPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPNLEPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPNLESD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPNLESS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPNLE_USPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPNLE_USPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPNLE_USPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPNLE_USPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPNLE_USPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPNLE_USPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPNLE_USSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPNLE_USSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPORDPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPORDPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPORDPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPORDPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPORDPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPORDPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPORDSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPORDSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPORD_QPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPORD_QPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPORD_QPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPORD_QPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPORD_QPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPORD_QPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPORD_QSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPORD_QSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPEQ_UQPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPEQ_UQPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPEQ_UQPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPEQ_UQPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPEQ_UQPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPEQ_UQPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPEQ_UQSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPEQ_UQSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPNGEPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPNGEPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPNGEPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPNGEPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPNGEPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPNGEPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPNGESD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPNGESS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPNGE_USPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPNGE_USPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPNGE_USPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPNGE_USPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPNGE_USPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPNGE_USPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPNGE_USSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512

VCMPNGE_USSS	kreg	mask,xmmreg,xmmrm32 sae	AVX512
VCMPNGTPD	kreg	mask,xmmreg,xmmrm128 b64	AVX512VL
VCMPNGTPD	kreg	mask,ymmreg,ymmrm256 b64	AVX512VL
VCMPNGTPD	kreg	mask,zmmreg,zmmrm512 b64 sae	AVX512
VCMPNGTPS	kreg	mask,xmmreg,xmmrm128 b32	AVX512VL
VCMPNGTPS	kreg	mask,ymmreg,ymmrm256 b32	AVX512VL
VCMPNGTPS	kreg	mask,zmmreg,zmmrm512 b32 sae	AVX512
VCMPNGTSD	kreg	mask,xmmreg,xmmrm64 sae	AVX512
VCMPNGTSS	kreg	mask,xmmreg,xmmrm32 sae	AVX512
VCMPNGT_USPD	kreg	mask,xmmreg,xmmrm128 b64	AVX512VL
VCMPNGT_USPD	kreg	mask,ymmreg,ymmrm256 b64	AVX512VL
VCMPNGT_USPD	kreg	mask,zmmreg,zmmrm512 b64 sae	AVX512
VCMPNGT_USPS	kreg	mask,xmmreg,xmmrm128 b32	AVX512VL
VCMPNGT_USPS	kreg	mask,ymmreg,ymmrm256 b32	AVX512VL
VCMPNGT_USPS	kreg	mask,zmmreg,zmmrm512 b32 sae	AVX512
VCMPNGT_USSD	kreg	mask,xmmreg,xmmrm64 sae	AVX512
VCMPNGT_USSS	kreg	mask,xmmreg,xmmrm32 sae	AVX512
VCMPFALSEPD	kreg	mask,xmmreg,xmmrm128 b64	AVX512VL
VCMPFALSEPD	kreg	mask,ymmreg,ymmrm256 b64	AVX512VL
VCMPFALSEPD	kreg	mask,zmmreg,zmmrm512 b64 sae	AVX512
VCMPFALSEPS	kreg	mask,xmmreg,xmmrm128 b32	AVX512VL
VCMPFALSEPS	kreg	mask,ymmreg,ymmrm256 b32	AVX512VL
VCMPFALSEPS	kreg	mask,zmmreg,zmmrm512 b32 sae	AVX512
VCMPFALSESD	kreg	mask,xmmreg,xmmrm64 sae	AVX512
VCMPFALSESS	kreg	mask,xmmreg,xmmrm32 sae	AVX512
VCMPFALSE_QQPD	kreg	mask,xmmreg,xmmrm128 b64	AVX512VL
VCMPFALSE_QQPD	kreg	mask,ymmreg,ymmrm256 b64	AVX512VL
VCMPFALSE_QQPD	kreg	mask,zmmreg,zmmrm512 b64 sae	AVX512
VCMPFALSE_QQPS	kreg	mask,xmmreg,xmmrm128 b32	AVX512VL
VCMPFALSE_QQPS	kreg	mask,ymmreg,ymmrm256 b32	AVX512VL
VCMPFALSE_QQPS	kreg	mask,zmmreg,zmmrm512 b32 sae	AVX512
VCMPFALSE_QQSD	kreg	mask,xmmreg,xmmrm64 sae	AVX512
VCMPFALSE_QQSS	kreg	mask,xmmreg,xmmrm32 sae	AVX512
VCMPNEQ_QQPD	kreg	mask,xmmreg,xmmrm128 b64	AVX512VL
VCMPNEQ_QQPD	kreg	mask,ymmreg,ymmrm256 b64	AVX512VL
VCMPNEQ_QQPD	kreg	mask,zmmreg,zmmrm512 b64 sae	AVX512
VCMPNEQ_QQPS	kreg	mask,xmmreg,xmmrm128 b32	AVX512VL
VCMPNEQ_QQPS	kreg	mask,ymmreg,ymmrm256 b32	AVX512VL
VCMPNEQ_QQPS	kreg	mask,zmmreg,zmmrm512 b32 sae	AVX512
VCMPNEQ_QQSD	kreg	mask,xmmreg,xmmrm64 sae	AVX512
VCMPNEQ_QQSS	kreg	mask,xmmreg,xmmrm32 sae	AVX512
VCMPGEPD	kreg	mask,xmmreg,xmmrm128 b64	AVX512VL
VCMPGEPD	kreg	mask,ymmreg,ymmrm256 b64	AVX512VL
VCMPGEPD	kreg	mask,zmmreg,zmmrm512 b64 sae	AVX512
VCMPGEPS	kreg	mask,xmmreg,xmmrm128 b32	AVX512VL
VCMPGEPS	kreg	mask,ymmreg,ymmrm256 b32	AVX512VL
VCMPGEPS	kreg	mask,zmmreg,zmmrm512 b32 sae	AVX512
VCMPGESD	kreg	mask,xmmreg,xmmrm64 sae	AVX512
VCMPGESS	kreg	mask,xmmreg,xmmrm32 sae	AVX512
VCMPGE_OSPD	kreg	mask,xmmreg,xmmrm128 b64	AVX512VL
VCMPGE_OSPD	kreg	mask,ymmreg,ymmrm256 b64	AVX512VL
VCMPGE_OSPD	kreg	mask,zmmreg,zmmrm512 b64 sae	AVX512
VCMPGE_OSPS	kreg	mask,xmmreg,xmmrm128 b32	AVX512VL
VCMPGE_OSPS	kreg	mask,ymmreg,ymmrm256 b32	AVX512VL
VCMPGE_OSPS	kreg	mask,zmmreg,zmmrm512 b32 sae	AVX512
VCMPGE_OSSD	kreg	mask,xmmreg,xmmrm64 sae	AVX512
VCMPGE_OSSS	kreg	mask,xmmreg,xmmrm32 sae	AVX512
VCMPGTPD	kreg	mask,xmmreg,xmmrm128 b64	AVX512VL
VCMPGTPD	kreg	mask,ymmreg,ymmrm256 b64	AVX512VL
VCMPGTPD	kreg	mask,zmmreg,zmmrm512 b64 sae	AVX512

VCMPGTPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPGTPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPGTPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPGTSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPGTSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPGT_OSPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPGT_OSPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPGT_OSPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPGT_OSPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPGT_OSPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPGT_OSPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPGT_OSSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPGT_OSSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPTRUEPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPTRUEPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPTRUEPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPTRUEPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPTRUEPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPTRUEPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPTRUESD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPTRUESS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPTRUE_UQPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPTRUE_UQPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPTRUE_UQPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPTRUE_UQPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPTRUE_UQPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPTRUE_UQPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPTRUE_UQSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPTRUE_UQSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPEQ_OSPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPEQ_OSPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPEQ_OSPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPEQ_OSPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPEQ_OSPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPEQ_OSPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPEQ_OSSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPEQ_OSSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPLT_OQPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPLT_OQPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPLT_OQPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPLT_OQPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPLT_OQPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPLT_OQPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPLT_OQSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPLT_OQSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPLE_OQPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPLE_OQPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPLE_OQPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPLE_OQPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPLE_OQPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPLE_OQPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPLE_OQSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPLE_OQSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPUNORD_SPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPUNORD_SPD	kreg	mask,ymmreg,ymrm256	b64	AVX512VL
VCMPUNORD_SPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPUNORD_SPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPUNORD_SPS	kreg	mask,ymmreg,ymrm256	b32	AVX512VL
VCMPUNORD_SPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPUNORD_SSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512

VCMPUNORD_SSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPNEQ_USPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPNEQ_USPD	kreg	mask,ymmreg,ymmrm256	b64	AVX512VL
VCMPNEQ_USPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPNEQ_USPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPNEQ_USPS	kreg	mask,ymmreg,ymmrm256	b32	AVX512VL
VCMPNEQ_USPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPNEQ_USSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPNEQ_USSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPNLT_UQPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPNLT_UQPD	kreg	mask,ymmreg,ymmrm256	b64	AVX512VL
VCMPNLT_UQPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPNLT_UQPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPNLT_UQPS	kreg	mask,ymmreg,ymmrm256	b32	AVX512VL
VCMPNLT_UQPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPNLT_UQSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPNLT_UQSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPNLE_UQPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPNLE_UQPD	kreg	mask,ymmreg,ymmrm256	b64	AVX512VL
VCMPNLE_UQPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPNLE_UQPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPNLE_UQPS	kreg	mask,ymmreg,ymmrm256	b32	AVX512VL
VCMPNLE_UQPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPNLE_UQSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPNLE_UQSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPORD_SPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPORD_SPD	kreg	mask,ymmreg,ymmrm256	b64	AVX512VL
VCMPORD_SPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPORD_SPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPORD_SPS	kreg	mask,ymmreg,ymmrm256	b32	AVX512VL
VCMPORD_SPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPORD_SSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPORD_SSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPEQ_USPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPEQ_USPD	kreg	mask,ymmreg,ymmrm256	b64	AVX512VL
VCMPEQ_USPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPEQ_USPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPEQ_USPS	kreg	mask,ymmreg,ymmrm256	b32	AVX512VL
VCMPEQ_USPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPEQ_USSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPEQ_USSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPNGE_UQPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPNGE_UQPD	kreg	mask,ymmreg,ymmrm256	b64	AVX512VL
VCMPNGE_UQPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPNGE_UQPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPNGE_UQPS	kreg	mask,ymmreg,ymmrm256	b32	AVX512VL
VCMPNGE_UQPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPNGE_UQSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPNGE_UQSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPNGT_UQPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPNGT_UQPD	kreg	mask,ymmreg,ymmrm256	b64	AVX512VL
VCMPNGT_UQPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512
VCMPNGT_UQPS	kreg	mask,xmmreg,xmmrm128	b32	AVX512VL
VCMPNGT_UQPS	kreg	mask,ymmreg,ymmrm256	b32	AVX512VL
VCMPNGT_UQPS	kreg	mask,zmmreg,zmmrm512	b32	sae AVX512
VCMPNGT_UQSD	kreg	mask,xmmreg,xmmrm64	sae	AVX512
VCMPNGT_UQSS	kreg	mask,xmmreg,xmmrm32	sae	AVX512
VCMPFALSE_OSPD	kreg	mask,xmmreg,xmmrm128	b64	AVX512VL
VCMPFALSE_OSPD	kreg	mask,ymmreg,ymmrm256	b64	AVX512VL
VCMPFALSE_OSPD	kreg	mask,zmmreg,zmmrm512	b64	sae AVX512

VCMPFALSE_OSPS	kreg mask,xmmreg,xmmrm128 b32	AVX512VL
VCMPFALSE_OSPS	kreg mask,ymmreg,ymmrm256 b32	AVX512VL
VCMPFALSE_OSPS	kreg mask,zmmreg,zmmrm512 b32 sae	AVX512
VCMPFALSE_OSSD	kreg mask,xmmreg,xmmrm64 sae	AVX512
VCMPFALSE_OSSS	kreg mask,xmmreg,xmmrm32 sae	AVX512
VCMPNEQ_OSPD	kreg mask,xmmreg,xmmrm128 b64	AVX512VL
VCMPNEQ_OSPD	kreg mask,ymmreg,ymmrm256 b64	AVX512VL
VCMPNEQ_OSPD	kreg mask,zmmreg,zmmrm512 b64 sae	AVX512
VCMPNEQ_OSPS	kreg mask,xmmreg,xmmrm128 b32	AVX512VL
VCMPNEQ_OSPS	kreg mask,ymmreg,ymmrm256 b32	AVX512VL
VCMPNEQ_OSPS	kreg mask,zmmreg,zmmrm512 b32 sae	AVX512
VCMPNEQ_OSSD	kreg mask,xmmreg,xmmrm64 sae	AVX512
VCMPNEQ_OSSS	kreg mask,xmmreg,xmmrm32 sae	AVX512
VCMPGE_OQPD	kreg mask,xmmreg,xmmrm128 b64	AVX512VL
VCMPGE_OQPD	kreg mask,ymmreg,ymmrm256 b64	AVX512VL
VCMPGE_OQPD	kreg mask,zmmreg,zmmrm512 b64 sae	AVX512
VCMPGE_OQPS	kreg mask,xmmreg,xmmrm128 b32	AVX512VL
VCMPGE_OQPS	kreg mask,ymmreg,ymmrm256 b32	AVX512VL
VCMPGE_OQPS	kreg mask,zmmreg,zmmrm512 b32 sae	AVX512
VCMPGE_OQSD	kreg mask,xmmreg,xmmrm64 sae	AVX512
VCMPGE_OQSS	kreg mask,xmmreg,xmmrm32 sae	AVX512
VCMPGT_OQPD	kreg mask,xmmreg,xmmrm128 b64	AVX512VL
VCMPGT_OQPD	kreg mask,ymmreg,ymmrm256 b64	AVX512VL
VCMPGT_OQPD	kreg mask,zmmreg,zmmrm512 b64 sae	AVX512
VCMPGT_OQPS	kreg mask,xmmreg,xmmrm128 b32	AVX512VL
VCMPGT_OQPS	kreg mask,ymmreg,ymmrm256 b32	AVX512VL
VCMPGT_OQPS	kreg mask,zmmreg,zmmrm512 b32 sae	AVX512
VCMPGT_OQSD	kreg mask,xmmreg,xmmrm64 sae	AVX512
VCMPGT_OQSS	kreg mask,xmmreg,xmmrm32 sae	AVX512
VCMPTRUE_USPD	kreg mask,xmmreg,xmmrm128 b64	AVX512VL
VCMPTRUE_USPD	kreg mask,ymmreg,ymmrm256 b64	AVX512VL
VCMPTRUE_USPD	kreg mask,zmmreg,zmmrm512 b64 sae	AVX512
VCMPTRUE_USPS	kreg mask,xmmreg,xmmrm128 b32	AVX512VL
VCMPTRUE_USPS	kreg mask,ymmreg,ymmrm256 b32	AVX512VL
VCMPTRUE_USPS	kreg mask,zmmreg,zmmrm512 b32 sae	AVX512
VCMPTRUE_USSD	kreg mask,xmmreg,xmmrm64 sae	AVX512
VCMPTRUE_USSS	kreg mask,xmmreg,xmmrm32 sae	AVX512
VCMPPPD	kreg mask,xmmreg,xmmrm128 b64,imm8	AVX512VL
VCMPPPD	kreg mask,ymmreg,ymmrm256 b64,imm8	AVX512VL
VCMPPPD	kreg mask,zmmreg,zmmrm512 b64 sae,imm8	AVX512
VCMPPS	kreg mask,xmmreg,xmmrm128 b32,imm8	AVX512VL
VCMPPS	kreg mask,ymmreg,ymmrm256 b32,imm8	AVX512VL
VCMPPS	kreg mask,zmmreg,zmmrm512 b32 sae,imm8	AVX512
VCMPSD	kreg mask,xmmreg,xmmrm64 sae,imm8	AVX512
VCMPSS	kreg mask,xmmreg,xmmrm32 sae,imm8	AVX512
VCOMISD	xmmreg,xmmrm64 sae	AVX512
VCOMISS	xmmreg,xmmrm32 sae	AVX512
VCOMPRESSPD	mem128 mask,xmmreg	AVX512VL
VCOMPRESSPD	mem256 mask,ymmreg	AVX512VL
VCOMPRESSPD	mem512 mask,zmmreg	AVX512
VCOMPRESSPD	xmmreg mask z,xmmreg	AVX512VL
VCOMPRESSPD	ymmreg mask z,ymmreg	AVX512VL
VCOMPRESSPD	zmmreg mask z,zmmreg	AVX512
VCOMPRESSPS	mem128 mask,xmmreg	AVX512VL
VCOMPRESSPS	mem256 mask,ymmreg	AVX512VL
VCOMPRESSPS	mem512 mask,zmmreg	AVX512
VCOMPRESSPS	xmmreg mask z,xmmreg	AVX512VL
VCOMPRESSPS	ymmreg mask z,ymmreg	AVX512VL
VCOMPRESSPS	zmmreg mask z,zmmreg	AVX512
VCVTDQ2PD	xmmreg mask z,xmmrm64 b32	AVX512VL

VCVTDQ2PD	ymmreg mask z,xmmrm128 b32	AVX512VL
VCVTDQ2PD	zmmreg mask z,ymmrm256 b32 er	AVX512
VCVTDQ2PS	xmmreg mask z,xmmrm128 b32	AVX512VL
VCVTDQ2PS	ymmreg mask z,ymmrm256 b32	AVX512VL
VCVTDQ2PS	zmmreg mask z,zmmrm512 b32 er	AVX512
VCVTPD2DQ	xmmreg mask z,xmmrm128 b64	AVX512VL
VCVTPD2DQ	xmmreg mask z,ymmrm256 b64	AVX512VL
VCVTPD2DQ	ymmreg mask z,zmmrm512 b64 er	AVX512
VCVTPD2PS	xmmreg mask z,xmmrm128 b64	AVX512VL
VCVTPD2PS	xmmreg mask z,ymmrm256 b64	AVX512VL
VCVTPD2PS	ymmreg mask z,zmmrm512 b64 er	AVX512
VCVTPD2QQ	xmmreg mask z,xmmrm128 b64	AVX512VL/DQ
VCVTPD2QQ	ymmreg mask z,ymmrm256 b64	AVX512VL/DQ
VCVTPD2QQ	zmmreg mask z,zmmrm512 b64 er	AVX512DQ
VCVTPD2UDQ	xmmreg mask z,xmmrm128 b64	AVX512VL
VCVTPD2UDQ	xmmreg mask z,ymmrm256 b64	AVX512VL
VCVTPD2UDQ	ymmreg mask z,zmmrm512 b64 er	AVX512
VCVTPD2UQQ	xmmreg mask z,xmmrm128 b64	AVX512VL/DQ
VCVTPD2UQQ	ymmreg mask z,ymmrm256 b64	AVX512VL/DQ
VCVTPD2UQQ	zmmreg mask z,zmmrm512 b64 er	AVX512DQ
VCVTPH2PS	xmmreg mask z,xmmrm64	AVX512VL
VCVTPH2PS	ymmreg mask z,xmmrm128	AVX512VL
VCVTPH2PS	zmmreg mask z,ymmrm256 sae	AVX512
VCVTPS2DQ	xmmreg mask z,xmmrm128 b32	AVX512VL
VCVTPS2DQ	ymmreg mask z,ymmrm256 b32	AVX512VL
VCVTPS2DQ	zmmreg mask z,zmmrm512 b32 er	AVX512
VCVTPS2PD	xmmreg mask z,xmmrm64 b32	AVX512VL
VCVTPS2PD	ymmreg mask z,xmmrm128 b32	AVX512VL
VCVTPS2PD	zmmreg mask z,ymmrm256 b32 sae	AVX512
VCVTPS2PH	xmmreg mask z,xmmreg,imm8	AVX512VL
VCVTPS2PH	xmmreg mask z,ymmreg,imm8	AVX512VL
VCVTPS2PH	ymmreg mask z,zmmreg sae,imm8	AVX512
VCVTPS2PH	mem64 mask,xmmreg,imm8	AVX512VL
VCVTPS2PH	mem128 mask,ymmreg,imm8	AVX512VL
VCVTPS2PH	mem256 mask,zmmreg sae,imm8	AVX512
VCVTPS2QQ	xmmreg mask z,xmmrm64 b32	AVX512VL/DQ
VCVTPS2QQ	ymmreg mask z,xmmrm128 b32	AVX512VL/DQ
VCVTPS2QQ	zmmreg mask z,ymmrm256 b32 er	AVX512DQ
VCVTPS2UDQ	xmmreg mask z,xmmrm128 b32	AVX512VL
VCVTPS2UDQ	ymmreg mask z,ymmrm256 b32	AVX512VL
VCVTPS2UDQ	zmmreg mask z,zmmrm512 b32 er	AVX512
VCVTPS2UQQ	xmmreg mask z,xmmrm64 b32	AVX512VL/DQ
VCVTPS2UQQ	ymmreg mask z,xmmrm128 b32	AVX512VL/DQ
VCVTPS2UQQ	zmmreg mask z,ymmrm256 b32 er	AVX512DQ
VCVTQQ2PD	xmmreg mask z,xmmrm128 b64	AVX512VL/DQ
VCVTQQ2PD	ymmreg mask z,ymmrm256 b64	AVX512VL/DQ
VCVTQQ2PD	zmmreg mask z,zmmrm512 b64 er	AVX512DQ
VCVTQQ2PS	xmmreg mask z,xmmrm128 b64	AVX512VL/DQ
VCVTQQ2PS	xmmreg mask z,ymmrm256 b64	AVX512VL/DQ
VCVTQQ2PS	ymmreg mask z,zmmrm512 b64 er	AVX512DQ
VCVTS2SI	reg32,xmmrm64 er	AVX512
VCVTS2SI	reg64,xmmrm64 er	AVX512
VCVTS2SS	xmmreg mask z,xmmreg,xmmrm64 er	AVX512
VCVTS2USI	reg32,xmmrm64 er	AVX512
VCVTS2USI	reg64,xmmrm64 er	AVX512
VCVTSI2SD	xmmreg,xmmreg er,rm32	AVX512
VCVTSI2SD	xmmreg,xmmreg er,rm64	AVX512
VCVTSI2SS	xmmreg,xmmreg er,rm32	AVX512
VCVTSI2SS	xmmreg,xmmreg er,rm64	AVX512
VCVTSS2SD	xmmreg mask z,xmmreg,xmmrm32 sae	AVX512

VCVTSS2SI	reg32,xmmrm32 er	AVX512
VCVTSS2SI	reg64,xmmrm32 er	AVX512
VCVTSS2USI	reg32,xmmrm32 er	AVX512
VCVTSS2USI	reg64,xmmrm32 er	AVX512
VCVTTPD2DQ	xmmreg mask z,xmmrm128 b64	AVX512VL
VCVTTPD2DQ	xmmreg mask z,ymmrm256 b64	AVX512VL
VCVTTPD2DQ	ymmreg mask z,zmmrm512 b64 sae	AVX512
VCVTTPD2QQ	xmmreg mask z,xmmrm128 b64	AVX512VL/DQ
VCVTTPD2QQ	ymmreg mask z,ymmrm256 b64	AVX512VL/DQ
VCVTTPD2QQ	zmmreg mask z,zmmrm512 b64 sae	AVX512DQ
VCVTTPD2UDQ	xmmreg mask z,xmmrm128 b64	AVX512VL
VCVTTPD2UDQ	xmmreg mask z,ymmrm256 b64	AVX512VL
VCVTTPD2UDQ	ymmreg mask z,zmmrm512 b64 sae	AVX512
VCVTTPD2UQQ	xmmreg mask z,xmmrm128 b64	AVX512VL/DQ
VCVTTPD2UQQ	ymmreg mask z,ymmrm256 b64	AVX512VL/DQ
VCVTTPD2UQQ	zmmreg mask z,zmmrm512 b64 sae	AVX512DQ
VCVTTPS2DQ	xmmreg mask z,xmmrm128 b32	AVX512VL
VCVTTPS2DQ	ymmreg mask z,ymmrm256 b32	AVX512VL
VCVTTPS2DQ	zmmreg mask z,zmmrm512 b32 sae	AVX512
VCVTTPS2QQ	xmmreg mask z,xmmrm64 b32	AVX512VL/DQ
VCVTTPS2QQ	ymmreg mask z,xmmrm128 b32	AVX512VL/DQ
VCVTTPS2QQ	zmmreg mask z,ymmrm256 b32 sae	AVX512DQ
VCVTTPS2UDQ	xmmreg mask z,xmmrm128 b32	AVX512VL
VCVTTPS2UDQ	ymmreg mask z,ymmrm256 b32	AVX512VL
VCVTTPS2UDQ	zmmreg mask z,zmmrm512 b32 sae	AVX512
VCVTTPS2UQQ	xmmreg mask z,xmmrm64 b32	AVX512VL/DQ
VCVTTPS2UQQ	ymmreg mask z,xmmrm128 b32	AVX512VL/DQ
VCVTTPS2UQQ	zmmreg mask z,ymmrm256 b32 sae	AVX512DQ
VCVTTS2SI	reg32,xmmrm64 sae	AVX512
VCVTTS2SI	reg64,xmmrm64 sae	AVX512
VCVTTS2USI	reg32,xmmrm64 sae	AVX512
VCVTTS2USI	reg64,xmmrm64 sae	AVX512
VCVTSS2SI	reg32,xmmrm32 sae	AVX512
VCVTSS2SI	reg64,xmmrm32 sae	AVX512
VCVTSS2USI	reg32,xmmrm32 sae	AVX512
VCVTSS2USI	reg64,xmmrm32 sae	AVX512
VCVTUDQ2PD	xmmreg mask z,xmmrm64 b32	AVX512VL
VCVTUDQ2PD	ymmreg mask z,xmmrm128 b32	AVX512VL
VCVTUDQ2PD	zmmreg mask z,ymmrm256 b32 er	AVX512
VCVTUDQ2PS	xmmreg mask z,xmmrm128 b32	AVX512VL
VCVTUDQ2PS	ymmreg mask z,ymmrm256 b32	AVX512VL
VCVTUDQ2PS	zmmreg mask z,zmmrm512 b32 er	AVX512
VCVTUQQ2PD	xmmreg mask z,xmmrm128 b64	AVX512VL/DQ
VCVTUQQ2PD	ymmreg mask z,ymmrm256 b64	AVX512VL/DQ
VCVTUQQ2PD	zmmreg mask z,zmmrm512 b64 er	AVX512DQ
VCVTUQQ2PS	xmmreg mask z,xmmrm128 b64	AVX512VL/DQ
VCVTUQQ2PS	xmmreg mask z,ymmrm256 b64	AVX512VL/DQ
VCVTUQQ2PS	ymmreg mask z,zmmrm512 b64 er	AVX512DQ
VCVTUSI2SD	xmmreg,xmmreg er,rm32	AVX512
VCVTUSI2SD	xmmreg,xmmreg er,rm64	AVX512
VCVTUSI2SS	xmmreg,xmmreg er,rm32	AVX512
VCVTUSI2SS	xmmreg,xmmreg er,rm64	AVX512
VDBPSADBW	xmmreg mask z,xmmreg*,xmmrm128,imm8	AVX512VL/BW
VDBPSADBW	ymmreg mask z,ymmreg*,ymmrm256,imm8	AVX512VL/BW
VDBPSADBW	zmmreg mask z,zmmreg*,zmmrm512,imm8	AVX512BW
VDIVPD	xmmreg mask z,xmmreg*,xmmrm128 b64	AVX512VL
VDIVPD	ymmreg mask z,ymmreg*,ymmrm256 b64	AVX512VL
VDIVPD	zmmreg mask z,zmmreg*,zmmrm512 b64 er	AVX512
VDIVPS	xmmreg mask z,xmmreg*,xmmrm128 b32	AVX512VL
VDIVPS	ymmreg mask z,ymmreg*,ymmrm256 b32	AVX512VL

VDIVPS	zmmreg	mask	z,zmmreg*,zmmrm512 b32 er	AVX512
VDIVSD	xmmreg	mask	z,xmmreg*,xmmrm64 er	AVX512
VDIVSS	xmmreg	mask	z,xmmreg*,xmmrm32 er	AVX512
VEXP2PD	zmmreg	mask	z,zmmrm512 b64 sae	AVX512ER
VEXP2PS	zmmreg	mask	z,zmmrm512 b32 sae	AVX512ER
VEXPANDPD	xmmreg	mask	z,mem128	AVX512VL
VEXPANDPD	ymmreg	mask	z,mem256	AVX512VL
VEXPANDPD	zmmreg	mask	z,mem512	AVX512
VEXPANDPD	xmmreg	mask	z,xmmreg	AVX512VL
VEXPANDPD	ymmreg	mask	z,ymmreg	AVX512VL
VEXPANDPD	zmmreg	mask	z,zmmreg	AVX512
VEXPANDPS	xmmreg	mask	z,mem128	AVX512VL
VEXPANDPS	ymmreg	mask	z,mem256	AVX512VL
VEXPANDPS	zmmreg	mask	z,mem512	AVX512
VEXPANDPS	xmmreg	mask	z,xmmreg	AVX512VL
VEXPANDPS	ymmreg	mask	z,ymmreg	AVX512VL
VEXPANDPS	zmmreg	mask	z,zmmreg	AVX512
VEXTRACTF32X4	xmmreg	mask	z,ymmreg,imm8	AVX512VL
VEXTRACTF32X4	xmmreg	mask	z,zmmreg,imm8	AVX512
VEXTRACTF32X4	mem128	mask	ymmreg,imm8	AVX512VL
VEXTRACTF32X4	mem128	mask	zmmreg,imm8	AVX512
VEXTRACTF32X8	ymmreg	mask	z,zmmreg,imm8	AVX512DQ
VEXTRACTF32X8	mem256	mask	zmmreg,imm8	AVX512DQ
VEXTRACTF64X2	xmmreg	mask	z,ymmreg,imm8	AVX512VL/DQ
VEXTRACTF64X2	xmmreg	mask	z,zmmreg,imm8	AVX512DQ
VEXTRACTF64X2	mem128	mask	ymmreg,imm8	AVX512VL/DQ
VEXTRACTF64X2	mem128	mask	zmmreg,imm8	AVX512DQ
VEXTRACTF64X4	ymmreg	mask	z,zmmreg,imm8	AVX512
VEXTRACTF64X4	mem256	mask	zmmreg,imm8	AVX512
VEXTRACTI32X4	xmmreg	mask	z,ymmreg,imm8	AVX512VL
VEXTRACTI32X4	xmmreg	mask	z,zmmreg,imm8	AVX512
VEXTRACTI32X4	mem128	mask	ymmreg,imm8	AVX512VL
VEXTRACTI32X4	mem128	mask	zmmreg,imm8	AVX512
VEXTRACTI32X8	ymmreg	mask	z,zmmreg,imm8	AVX512DQ
VEXTRACTI32X8	mem256	mask	zmmreg,imm8	AVX512DQ
VEXTRACTI64X2	xmmreg	mask	z,ymmreg,imm8	AVX512VL/DQ
VEXTRACTI64X2	xmmreg	mask	z,zmmreg,imm8	AVX512DQ
VEXTRACTI64X2	mem128	mask	ymmreg,imm8	AVX512VL/DQ
VEXTRACTI64X2	mem128	mask	zmmreg,imm8	AVX512DQ
VEXTRACTI64X4	ymmreg	mask	z,zmmreg,imm8	AVX512
VEXTRACTI64X4	mem256	mask	zmmreg,imm8	AVX512
VEXTRACTPS	reg32,xmmreg		imm8	AVX512
VEXTRACTPS	reg64,xmmreg		imm8	AVX512
VEXTRACTPS	mem32,xmmreg		imm8	AVX512
VFIXUPIIMPPD	xmmreg	mask	z,xmmreg*,xmmrm128 b64,imm8	AVX512VL
VFIXUPIIMPPD	ymmreg	mask	z,ymmreg*,ymmrm256 b64,imm8	AVX512VL
VFIXUPIIMPPD	zmmreg	mask	z,zmmreg*,zmmrm512 b64 sae,imm8	AVX512
VFIXUPIIMPPS	xmmreg	mask	z,xmmreg*,xmmrm128 b32,imm8	AVX512VL
VFIXUPIIMPPS	ymmreg	mask	z,ymmreg*,ymmrm256 b32,imm8	AVX512VL
VFIXUPIIMPPS	zmmreg	mask	z,zmmreg*,zmmrm512 b32 sae,imm8	AVX512
VFIXUPIIMMSD	xmmreg	mask	z,xmmreg*,xmmrm64 sae,imm8	AVX512
VFIXUPIIMSS	xmmreg	mask	z,xmmreg*,xmmrm32 sae,imm8	AVX512
VFMADD132PD	xmmreg	mask	z,xmmreg,xmmrm128 b64	AVX512VL
VFMADD132PD	ymmreg	mask	z,ymmreg,ymmrm256 b64	AVX512VL
VFMADD132PD	zmmreg	mask	z,zmmreg,zmmrm512 b64 er	AVX512
VFMADD132PS	xmmreg	mask	z,xmmreg,xmmrm128 b32	AVX512VL
VFMADD132PS	ymmreg	mask	z,ymmreg,ymmrm256 b32	AVX512VL
VFMADD132PS	zmmreg	mask	z,zmmreg,zmmrm512 b32 er	AVX512
VFMADD132SD	xmmreg	mask	z,xmmreg,xmmrm64 er	AVX512
VFMADD132SS	xmmreg	mask	z,xmmreg,xmmrm32 er	AVX512

VFMADD213PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFMADD213PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFMADD213PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFMADD213PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFMADD213PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFMADD213PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFMADD213SD	xmmreg	mask	z, xmmreg, xmmrm64	er	AVX512
VFMADD213SS	xmmreg	mask	z, xmmreg, xmmrm32	er	AVX512
VFMADD231PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFMADD231PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFMADD231PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFMADD231PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFMADD231PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFMADD231PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFMADD231SD	xmmreg	mask	z, xmmreg, xmmrm64	er	AVX512
VFMADD231SS	xmmreg	mask	z, xmmreg, xmmrm32	er	AVX512
VFMADDSUB132PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFMADDSUB132PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFMADDSUB132PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFMADDSUB132PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFMADDSUB132PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFMADDSUB132PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFMADDSUB213PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFMADDSUB213PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFMADDSUB213PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFMADDSUB213PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFMADDSUB213PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFMADDSUB213PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFMADDSUB231PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFMADDSUB231PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFMADDSUB231PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFMADDSUB231PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFMADDSUB231PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFMADDSUB231PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFMSUB132PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFMSUB132PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFMSUB132PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFMSUB132PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFMSUB132PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFMSUB132PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFMSUB132SD	xmmreg	mask	z, xmmreg, xmmrm64	er	AVX512
VFMSUB132SS	xmmreg	mask	z, xmmreg, xmmrm32	er	AVX512
VFMSUB213PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFMSUB213PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFMSUB213PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFMSUB213PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFMSUB213PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFMSUB213PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFMSUB213SD	xmmreg	mask	z, xmmreg, xmmrm64	er	AVX512
VFMSUB213SS	xmmreg	mask	z, xmmreg, xmmrm32	er	AVX512
VFMSUB231PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFMSUB231PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFMSUB231PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFMSUB231PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFMSUB231PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFMSUB231PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFMSUB231SD	xmmreg	mask	z, xmmreg, xmmrm64	er	AVX512
VFMSUB231SS	xmmreg	mask	z, xmmreg, xmmrm32	er	AVX512
VFMSUBADD132PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFMSUBADD132PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL

VFMSUBADD132PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFMSUBADD132PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFMSUBADD132PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFMSUBADD132PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFMSUBADD213PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFMSUBADD213PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFMSUBADD213PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFMSUBADD213PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFMSUBADD213PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFMSUBADD213PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFMSUBADD231PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFMSUBADD231PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFMSUBADD231PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFMSUBADD231PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFMSUBADD231PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFMSUBADD231PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFNMADD132PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFNMADD132PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFNMADD132PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFNMADD132PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFNMADD132PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFNMADD132PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFNMADD132SD	xmmreg	mask	z, xmmreg, xmmrm64	er AVX512	
VFNMADD132SS	xmmreg	mask	z, xmmreg, xmmrm32	er AVX512	
VFNMADD213PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFNMADD213PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFNMADD213PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFNMADD213PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFNMADD213PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFNMADD213PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFNMADD213SD	xmmreg	mask	z, xmmreg, xmmrm64	er AVX512	
VFNMADD213SS	xmmreg	mask	z, xmmreg, xmmrm32	er AVX512	
VFNMADD231PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFNMADD231PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFNMADD231PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFNMADD231PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFNMADD231PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFNMADD231PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFNMADD231SD	xmmreg	mask	z, xmmreg, xmmrm64	er AVX512	
VFNMADD231SS	xmmreg	mask	z, xmmreg, xmmrm32	er AVX512	
VFNMSUB132PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFNMSUB132PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFNMSUB132PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFNMSUB132PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFNMSUB132PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFNMSUB132PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFNMSUB132SD	xmmreg	mask	z, xmmreg, xmmrm64	er AVX512	
VFNMSUB132SS	xmmreg	mask	z, xmmreg, xmmrm32	er AVX512	
VFNMSUB213PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFNMSUB213PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFNMSUB213PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFNMSUB213PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL
VFNMSUB213PS	ymmreg	mask	z, ymmreg, ymmrm256	b32	AVX512VL
VFNMSUB213PS	zmmreg	mask	z, zmmreg, zmmrm512	b32	er AVX512
VFNMSUB213SD	xmmreg	mask	z, xmmreg, xmmrm64	er AVX512	
VFNMSUB213SS	xmmreg	mask	z, xmmreg, xmmrm32	er AVX512	
VFNMSUB231PD	xmmreg	mask	z, xmmreg, xmmrm128	b64	AVX512VL
VFNMSUB231PD	ymmreg	mask	z, ymmreg, ymmrm256	b64	AVX512VL
VFNMSUB231PD	zmmreg	mask	z, zmmreg, zmmrm512	b64	er AVX512
VFNMSUB231PS	xmmreg	mask	z, xmmreg, xmmrm128	b32	AVX512VL

VFNMSUB231PS	ymmreg mask z,ymmreg,ymmrm256 b32	AVX512VL
VFNMSUB231PS	zmmreg mask z,zmmreg,zmmrm512 b32 er	AVX512
VFNMSUB231SD	xmmreg mask z,xmmreg,xmmrm64 er	AVX512
VFNMSUB231SS	xmmreg mask z,xmmreg,xmmrm32 er	AVX512
VFPCLASSPD	kreg mask,xmmrm128 b64,imm8	AVX512VL/DQ
VFPCLASSPD	kreg mask,ymmrm256 b64,imm8	AVX512VL/DQ
VFPCLASSPD	kreg mask,zmmrm512 b64,imm8	AVX512DQ
VFPCLASSPS	kreg mask,xmmrm128 b32,imm8	AVX512VL/DQ
VFPCLASSPS	kreg mask,ymmrm256 b32,imm8	AVX512VL/DQ
VFPCLASSPS	kreg mask,zmmrm512 b32,imm8	AVX512DQ
VFPCLASSSD	kreg mask,xmmrm64,imm8	AVX512DQ
VFPCLASSSS	kreg mask,xmmrm32,imm8	AVX512DQ
VGATHERDPD	xmmreg mask,xmem64	AVX512VL
VGATHERDPD	ymmreg mask,xmem64	AVX512VL
VGATHERDPD	zmmreg mask,ymem64	AVX512
VGATHERDPS	xmmreg mask,xmem32	AVX512VL
VGATHERDPS	ymmreg mask,ymem32	AVX512VL
VGATHERDPS	zmmreg mask,zmem32	AVX512
VGATHERPF0DPD	ymem64 mask	AVX512PF
VGATHERPF0DPS	zmem32 mask	AVX512PF
VGATHERPF0QPD	zmem64 mask	AVX512PF
VGATHERPF0QPS	zmem32 mask	AVX512PF
VGATHERPF1DPD	ymem64 mask	AVX512PF
VGATHERPF1DPS	zmem32 mask	AVX512PF
VGATHERPF1QPD	zmem64 mask	AVX512PF
VGATHERPF1QPS	zmem32 mask	AVX512PF
VGATHERQPD	xmmreg mask,xmem64	AVX512VL
VGATHERQPD	ymmreg mask,ymem64	AVX512VL
VGATHERQPD	zmmreg mask,zmem64	AVX512
VGATHERQPS	xmmreg mask,xmem32	AVX512VL
VGATHERQPS	xmmreg mask,ymem32	AVX512VL
VGATHERQPS	ymmreg mask,zmem32	AVX512
VGETEXPPD	xmmreg mask z,xmmrm128 b64	AVX512VL
VGETEXPPD	ymmreg mask z,ymmrm256 b64	AVX512VL
VGETEXPPD	zmmreg mask z,zmmrm512 b64 sae	AVX512
VGETEXPPS	xmmreg mask z,xmmrm128 b32	AVX512VL
VGETEXPPS	ymmreg mask z,ymmrm256 b32	AVX512VL
VGETEXPPS	zmmreg mask z,zmmrm512 b32 sae	AVX512
VGETEXPSD	xmmreg mask z,xmmreg,xmmrm64 sae	AVX512
VGETEXPSS	xmmreg mask z,xmmreg,xmmrm32 sae	AVX512
VGETMANTPD	xmmreg mask z,xmmrm128 b64,imm8	AVX512VL
VGETMANTPD	ymmreg mask z,ymmrm256 b64,imm8	AVX512VL
VGETMANTPD	zmmreg mask z,zmmrm512 b64 sae,imm8	AVX512
VGETMANTPS	xmmreg mask z,xmmrm128 b32,imm8	AVX512VL
VGETMANTPS	ymmreg mask z,ymmrm256 b32,imm8	AVX512VL
VGETMANTPS	zmmreg mask z,zmmrm512 b32 sae,imm8	AVX512
VGETMANTSD	xmmreg mask z,xmmreg,xmmrm64 sae,imm8	AVX512
VGETMANTSS	xmmreg mask z,xmmreg,xmmrm32 sae,imm8	AVX512
VINSERTF32X4	ymmreg mask z,ymmreg*,xmmrm128,imm8	AVX512VL
VINSERTF32X4	zmmreg mask z,zmmreg*,xmmrm128,imm8	AVX512
VINSERTF32X8	zmmreg mask z,zmmreg*,ymmrm256,imm8	AVX512DQ
VINSERTF64X2	ymmreg mask z,ymmreg*,xmmrm128,imm8	AVX512VL/DQ
VINSERTF64X2	zmmreg mask z,zmmreg*,xmmrm128,imm8	AVX512DQ
VINSERTF64X4	zmmreg mask z,zmmreg*,ymmrm256,imm8	AVX512
VINSERTI32X4	ymmreg mask z,ymmreg*,xmmrm128,imm8	AVX512VL
VINSERTI32X4	zmmreg mask z,zmmreg*,xmmrm128,imm8	AVX512
VINSERTI32X8	zmmreg mask z,zmmreg*,ymmrm256,imm8	AVX512DQ
VINSERTI64X2	ymmreg mask z,ymmreg*,xmmrm128,imm8	AVX512VL/DQ
VINSERTI64X2	zmmreg mask z,zmmreg*,xmmrm128,imm8	AVX512DQ
VINSERTI64X4	zmmreg mask z,zmmreg*,ymmrm256,imm8	AVX512

VINSERTPS	xmmreg,xmmreg*,xmrm32,imm8	AVX512
VMAXPD	xmmreg mask z,xmmreg*,xmrm128 b64	AVX512VL
VMAXPD	ymmreg mask z,ymmreg*,ymrm256 b64	AVX512VL
VMAXPD	zmmreg mask z,zmmreg*,zmmrm512 b64 sae	AVX512
VMAXPS	xmmreg mask z,xmmreg*,xmrm128 b32	AVX512VL
VMAXPS	ymmreg mask z,ymmreg*,ymrm256 b32	AVX512VL
VMAXPS	zmmreg mask z,zmmreg*,zmmrm512 b32 sae	AVX512
VMAXSD	xmmreg mask z,xmmreg*,xmrm64 sae	AVX512
VMAXSS	xmmreg mask z,xmmreg*,xmrm32 sae	AVX512
VMINPD	xmmreg mask z,xmmreg*,xmrm128 b64	AVX512VL
VMINPD	ymmreg mask z,ymmreg*,ymrm256 b64	AVX512VL
VMINPD	zmmreg mask z,zmmreg*,zmmrm512 b64 sae	AVX512
VMINPS	xmmreg mask z,xmmreg*,xmrm128 b32	AVX512VL
VMINPS	ymmreg mask z,ymmreg*,ymrm256 b32	AVX512VL
VMINPS	zmmreg mask z,zmmreg*,zmmrm512 b32 sae	AVX512
VMINSD	xmmreg mask z,xmmreg*,xmrm64 sae	AVX512
VMINSS	xmmreg mask z,xmmreg*,xmrm32 sae	AVX512
VMOVAPD	xmmreg mask z,xmrm128	AVX512VL
VMOVAPD	ymmreg mask z,ymrm256	AVX512VL
VMOVAPD	zmmreg mask z,zmmrm512	AVX512
VMOVAPD	xmmreg mask z,xmmreg	AVX512VL
VMOVAPD	ymmreg mask z,ymmreg	AVX512VL
VMOVAPD	zmmreg mask z,zmmreg	AVX512
VMOVAPD	mem128 mask,xmmreg	AVX512VL
VMOVAPD	mem256 mask,ymmreg	AVX512VL
VMOVAPD	mem512 mask,zmmreg	AVX512
VMOVAPS	xmmreg mask z,xmrm128	AVX512VL
VMOVAPS	ymmreg mask z,ymrm256	AVX512VL
VMOVAPS	zmmreg mask z,zmmrm512	AVX512
VMOVAPS	xmmreg mask z,xmmreg	AVX512VL
VMOVAPS	ymmreg mask z,ymmreg	AVX512VL
VMOVAPS	zmmreg mask z,zmmreg	AVX512
VMOVAPS	mem128 mask,xmmreg	AVX512VL
VMOVAPS	mem256 mask,ymmreg	AVX512VL
VMOVAPS	mem512 mask,zmmreg	AVX512
VMOVD	xmmreg,rm32	AVX512
VMOVD	rm32,xmmreg	AVX512
VMOVDDUP	xmmreg mask z,xmrm64	AVX512VL
VMOVDDUP	ymmreg mask z,ymrm256	AVX512VL
VMOVDDUP	zmmreg mask z,zmmrm512	AVX512
VMOVDQA32	xmmreg mask z,xmrm128	AVX512VL
VMOVDQA32	ymmreg mask z,ymrm256	AVX512VL
VMOVDQA32	zmmreg mask z,zmmrm512	AVX512
VMOVDQA32	xmrm128 mask z,xmmreg	AVX512VL
VMOVDQA32	ymrm256 mask z,ymmreg	AVX512VL
VMOVDQA32	zmmrm512 mask z,zmmreg	AVX512
VMOVDQA64	xmmreg mask z,xmrm128	AVX512VL
VMOVDQA64	ymmreg mask z,ymrm256	AVX512VL
VMOVDQA64	zmmreg mask z,zmmrm512	AVX512
VMOVDQA64	xmrm128 mask z,xmmreg	AVX512VL
VMOVDQA64	ymrm256 mask z,ymmreg	AVX512VL
VMOVDQA64	zmmrm512 mask z,zmmreg	AVX512
VMOVDQU16	xmmreg mask z,xmrm128	AVX512VL/BW
VMOVDQU16	ymmreg mask z,ymrm256	AVX512VL/BW
VMOVDQU16	zmmreg mask z,zmmrm512	AVX512BW
VMOVDQU16	xmrm128 mask z,xmmreg	AVX512VL/BW
VMOVDQU16	ymrm256 mask z,ymmreg	AVX512VL/BW
VMOVDQU16	zmmrm512 mask z,zmmreg	AVX512BW
VMOVDQU32	xmmreg mask z,xmrm128	AVX512VL
VMOVDQU32	ymmreg mask z,ymrm256	AVX512VL

VMOVDQU32	zmmreg mask z,zmmrm512	AVX512
VMOVDQU32	xmmrm128 mask z,xmmreg	AVX512VL
VMOVDQU32	ymmrm256 mask z,ymmreg	AVX512VL
VMOVDQU32	zmmrm512 mask z,zmmreg	AVX512
VMOVDQU64	xmmreg mask z,xmmrm128	AVX512VL
VMOVDQU64	ymmreg mask z,ymmrm256	AVX512VL
VMOVDQU64	zmmreg mask z,zmmrm512	AVX512
VMOVDQU64	xmmrm128 mask z,xmmreg	AVX512VL
VMOVDQU64	ymmrm256 mask z,ymmreg	AVX512VL
VMOVDQU64	zmmrm512 mask z,zmmreg	AVX512
VMOVDQU8	xmmreg mask z,xmmrm128	AVX512VL/BW
VMOVDQU8	ymmreg mask z,ymmrm256	AVX512VL/BW
VMOVDQU8	zmmreg mask z,zmmrm512	AVX512BW
VMOVDQU8	xmmrm128 mask z,xmmreg	AVX512VL/BW
VMOVDQU8	ymmrm256 mask z,ymmreg	AVX512VL/BW
VMOVDQU8	zmmrm512 mask z,zmmreg	AVX512BW
VMOVHLPs	xmmreg,xmmreg*,xmmreg	AVX512
VMOVHPD	xmmreg,xmmreg*,mem64	AVX512
VMOVHPD	mem64,xmmreg	AVX512
VMOVHPS	xmmreg,xmmreg*,mem64	AVX512
VMOVHPS	mem64,xmmreg	AVX512
VMOVLHPS	xmmreg,xmmreg*,xmmreg	AVX512
VMOVLPD	xmmreg,xmmreg*,mem64	AVX512
VMOVLPD	mem64,xmmreg	AVX512
VMOVLPS	xmmreg,xmmreg*,mem64	AVX512
VMOVLPS	mem64,xmmreg	AVX512
VMOVNTDQ	mem128,xmmreg	AVX512VL
VMOVNTDQ	mem256,ymmreg	AVX512VL
VMOVNTDQ	mem512,zmmreg	AVX512
VMOVNTDQA	xmmreg,mem128	AVX512VL
VMOVNTDQA	ymmreg,mem256	AVX512VL
VMOVNTDQA	zmmreg,mem512	AVX512
VMOVNTPD	mem128,xmmreg	AVX512VL
VMOVNTPD	mem256,ymmreg	AVX512VL
VMOVNTPD	mem512,zmmreg	AVX512
VMOVNTPS	mem128,xmmreg	AVX512VL
VMOVNTPS	mem256,ymmreg	AVX512VL
VMOVNTPS	mem512,zmmreg	AVX512
VMOVQ	xmmreg,rm64	AVX512
VMOVQ	rm64,xmmreg	AVX512
VMOVQ	xmmreg,xmmrm64	AVX512
VMOVQ	xmmrm64,xmmreg	AVX512
VMOVSD	xmmreg mask z,mem64	AVX512
VMOVSD	mem64 mask,xmmreg	AVX512
VMOVSD	xmmreg mask z,xmmreg*,xmmreg	AVX512
VMOVSD	xmmreg mask z,xmmreg*,xmmreg	AVX512
VMOVSHDUP	xmmreg mask z,xmmrm128	AVX512VL
VMOVSHDUP	ymmreg mask z,ymmrm256	AVX512VL
VMOVSHDUP	zmmreg mask z,zmmrm512	AVX512
VMOVSLDUP	xmmreg mask z,xmmrm128	AVX512VL
VMOVSLDUP	ymmreg mask z,ymmrm256	AVX512VL
VMOVSLDUP	zmmreg mask z,zmmrm512	AVX512
VMOVSS	xmmreg mask z,mem32	AVX512
VMOVSS	mem32 mask,xmmreg	AVX512
VMOVSS	xmmreg mask z,xmmreg*,xmmreg	AVX512
VMOVSS	xmmreg mask z,xmmreg*,xmmreg	AVX512
VMOVUPD	xmmreg mask z,xmmrm128	AVX512VL
VMOVUPD	ymmreg mask z,ymmrm256	AVX512VL
VMOVUPD	zmmreg mask z,zmmrm512	AVX512
VMOVUPD	xmmreg mask z,xmmreg	AVX512VL

VMOVUPD	ymmreg	mask	z,ymmreg	AVX512VL
VMOVUPD	zmmreg	mask	z,zmmreg	AVX512
VMOVUPD	mem128	mask,xmmreg		AVX512VL
VMOVUPD	mem256	mask,ymmreg		AVX512VL
VMOVUPD	mem512	mask,zmmreg		AVX512
VMOVUPS	xmmreg	mask	z,xmmrm128	AVX512VL
VMOVUPS	ymmreg	mask	z,ymmr256	AVX512VL
VMOVUPS	zmmreg	mask	z,zmmrm512	AVX512
VMOVUPS	xmmreg	mask	z,xmmreg	AVX512VL
VMOVUPS	ymmreg	mask	z,ymmreg	AVX512VL
VMOVUPS	zmmreg	mask	z,zmmreg	AVX512
VMOVUPS	mem128	mask,xmmreg		AVX512VL
VMOVUPS	mem256	mask,ymmreg		AVX512VL
VMOVUPS	mem512	mask,zmmreg		AVX512
VMULPD	xmmreg	mask	z,xmmreg*,xmmrm128	b64 AVX512VL
VMULPD	ymmreg	mask	z,ymmreg*,ymmr256	b64 AVX512VL
VMULPD	zmmreg	mask	z,zmmreg*,zmmrm512	b64 er AVX512
VMULPS	xmmreg	mask	z,xmmreg*,xmmrm128	b32 AVX512VL
VMULPS	ymmreg	mask	z,ymmreg*,ymmr256	b32 AVX512VL
VMULPS	zmmreg	mask	z,zmmreg*,zmmrm512	b32 er AVX512
VMULSD	xmmreg	mask	z,xmmreg*,xmmrm64	er AVX512
VMULSS	xmmreg	mask	z,xmmreg*,xmmrm32	er AVX512
VORPD	xmmreg	mask	z,xmmreg*,xmmrm128	b64 AVX512VL/DQ
VORPD	ymmreg	mask	z,ymmreg*,ymmr256	b64 AVX512VL/DQ
VORPD	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512DQ
VORPS	xmmreg	mask	z,xmmreg*,xmmrm128	b32 AVX512VL/DQ
VORPS	ymmreg	mask	z,ymmreg*,ymmr256	b32 AVX512VL/DQ
VORPS	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512DQ
VPABSB	xmmreg	mask	z,xmmrm128	AVX512VL/BW
VPABSB	ymmreg	mask	z,ymmr256	AVX512VL/BW
VPABSB	zmmreg	mask	z,zmmrm512	AVX512BW
VPABSD	xmmreg	mask	z,xmmrm128	b32 AVX512VL
VPABSD	ymmreg	mask	z,ymmr256	b32 AVX512VL
VPABSD	zmmreg	mask	z,zmmrm512	b32 AVX512
VPABSQ	xmmreg	mask	z,xmmrm128	b64 AVX512VL
VPABSQ	ymmreg	mask	z,ymmr256	b64 AVX512VL
VPABSQ	zmmreg	mask	z,zmmrm512	b64 AVX512
VPABSW	xmmreg	mask	z,xmmrm128	AVX512VL/BW
VPABSW	ymmreg	mask	z,ymmr256	AVX512VL/BW
VPABSW	zmmreg	mask	z,zmmrm512	AVX512BW
VPACKSSDW	xmmreg	mask	z,xmmreg*,xmmrm128	b32 AVX512VL/BW
VPACKSSDW	ymmreg	mask	z,ymmreg*,ymmr256	b32 AVX512VL/BW
VPACKSSDW	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512BW
VPACKSSWB	xmmreg	mask	z,xmmreg*,xmmrm128	AVX512VL/BW
VPACKSSWB	ymmreg	mask	z,ymmreg*,ymmr256	AVX512VL/BW
VPACKSSWB	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPACKUSDW	xmmreg	mask	z,xmmreg*,xmmrm128	b32 AVX512VL/BW
VPACKUSDW	ymmreg	mask	z,ymmreg*,ymmr256	b32 AVX512VL/BW
VPACKUSDW	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512BW
VPACKUSWB	xmmreg	mask	z,xmmreg*,xmmrm128	AVX512VL/BW
VPACKUSWB	ymmreg	mask	z,ymmreg*,ymmr256	AVX512VL/BW
VPACKUSWB	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPADDB	xmmreg	mask	z,xmmreg*,xmmrm128	AVX512VL/BW
VPADDB	ymmreg	mask	z,ymmreg*,ymmr256	AVX512VL/BW
VPADDB	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPADDD	xmmreg	mask	z,xmmreg*,xmmrm128	b32 AVX512VL
VPADDD	ymmreg	mask	z,ymmreg*,ymmr256	b32 AVX512VL
VPADDD	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512
VPADDQ	xmmreg	mask	z,xmmreg*,xmmrm128	b64 AVX512VL
VPADDQ	ymmreg	mask	z,ymmreg*,ymmr256	b64 AVX512VL

VPADDQ	zmmreg	mask	z, zmmreg*, zmmrm512	b64 AVX512
VPADDSB	xmmreg	mask	z, xmmreg*, xmmrm128	AVX512VL/BW
VPADDSB	ymmreg	mask	z, ymmreg*, ymmrm256	AVX512VL/BW
VPADDSB	zmmreg	mask	z, zmmreg*, zmmrm512	AVX512BW
VPADDSW	xmmreg	mask	z, xmmreg*, xmmrm128	AVX512VL/BW
VPADDSW	ymmreg	mask	z, ymmreg*, ymmrm256	AVX512VL/BW
VPADDSW	zmmreg	mask	z, zmmreg*, zmmrm512	AVX512BW
VPADDUSB	xmmreg	mask	z, xmmreg*, xmmrm128	AVX512VL/BW
VPADDUSB	ymmreg	mask	z, ymmreg*, ymmrm256	AVX512VL/BW
VPADDUSB	zmmreg	mask	z, zmmreg*, zmmrm512	AVX512BW
VPADDUSW	xmmreg	mask	z, xmmreg*, xmmrm128	AVX512VL/BW
VPADDUSW	ymmreg	mask	z, ymmreg*, ymmrm256	AVX512VL/BW
VPADDUSW	zmmreg	mask	z, zmmreg*, zmmrm512	AVX512BW
VPADDW	xmmreg	mask	z, xmmreg*, xmmrm128	AVX512VL/BW
VPADDW	ymmreg	mask	z, ymmreg*, ymmrm256	AVX512VL/BW
VPADDW	zmmreg	mask	z, zmmreg*, zmmrm512	AVX512BW
VPALIGNR	xmmreg	mask	z, xmmreg*, xmmrm128, imm8	AVX512VL/BW
VPALIGNR	ymmreg	mask	z, ymmreg*, ymmrm256, imm8	AVX512VL/BW
VPALIGNR	zmmreg	mask	z, zmmreg*, zmmrm512, imm8	AVX512BW
VPANDD	xmmreg	mask	z, xmmreg*, xmmrm128	b32 AVX512VL
VPANDD	ymmreg	mask	z, ymmreg*, ymmrm256	b32 AVX512VL
VPANDD	zmmreg	mask	z, zmmreg*, zmmrm512	b32 AVX512
VPANDND	xmmreg	mask	z, xmmreg*, xmmrm128	b32 AVX512VL
VPANDND	ymmreg	mask	z, ymmreg*, ymmrm256	b32 AVX512VL
VPANDND	zmmreg	mask	z, zmmreg*, zmmrm512	b32 AVX512
VPANDNQ	xmmreg	mask	z, xmmreg*, xmmrm128	b64 AVX512VL
VPANDNQ	ymmreg	mask	z, ymmreg*, ymmrm256	b64 AVX512VL
VPANDNQ	zmmreg	mask	z, zmmreg*, zmmrm512	b64 AVX512
VPANDQ	xmmreg	mask	z, xmmreg*, xmmrm128	b64 AVX512VL
VPANDQ	ymmreg	mask	z, ymmreg*, ymmrm256	b64 AVX512VL
VPANDQ	zmmreg	mask	z, zmmreg*, zmmrm512	b64 AVX512
VPAVGB	xmmreg	mask	z, xmmreg*, xmmrm128	AVX512VL/BW
VPAVGB	ymmreg	mask	z, ymmreg*, ymmrm256	AVX512VL/BW
VPAVGB	zmmreg	mask	z, zmmreg*, zmmrm512	AVX512BW
VPAVGW	xmmreg	mask	z, xmmreg*, xmmrm128	AVX512VL/BW
VPAVGW	ymmreg	mask	z, ymmreg*, ymmrm256	AVX512VL/BW
VPAVGW	zmmreg	mask	z, zmmreg*, zmmrm512	AVX512BW
VPBLENDMB	xmmreg	mask	z, xmmreg, xmmrm128	AVX512VL/BW
VPBLENDMB	ymmreg	mask	z, ymmreg, ymmrm256	AVX512VL/BW
VPBLENDMB	zmmreg	mask	z, zmmreg, zmmrm512	AVX512BW
VPBLENDMD	xmmreg	mask	z, xmmreg, xmmrm128	b32 AVX512VL
VPBLENDMD	ymmreg	mask	z, ymmreg, ymmrm256	b32 AVX512VL
VPBLENDMD	zmmreg	mask	z, zmmreg, zmmrm512	b32 AVX512
VPBLENDMQ	xmmreg	mask	z, xmmreg, xmmrm128	b64 AVX512VL
VPBLENDMQ	ymmreg	mask	z, ymmreg, ymmrm256	b64 AVX512VL
VPBLENDMQ	zmmreg	mask	z, zmmreg, zmmrm512	b64 AVX512
VPBLENDMW	xmmreg	mask	z, xmmreg, xmmrm128	AVX512VL/BW
VPBLENDMW	ymmreg	mask	z, ymmreg, ymmrm256	AVX512VL/BW
VPBLENDMW	zmmreg	mask	z, zmmreg, zmmrm512	AVX512BW
VPBROADCASTB	xmmreg	mask	z, xmmrm8	AVX512VL/BW
VPBROADCASTB	ymmreg	mask	z, xmmrm8	AVX512VL/BW
VPBROADCASTB	zmmreg	mask	z, xmmrm8	AVX512BW
VPBROADCASTB	xmmreg	mask	z, reg8	AVX512VL/BW
VPBROADCASTB	xmmreg	mask	z, reg16	AVX512VL/BW
VPBROADCASTB	xmmreg	mask	z, reg32	AVX512VL/BW
VPBROADCASTB	xmmreg	mask	z, reg64	AVX512VL/BW
VPBROADCASTB	ymmreg	mask	z, reg8	AVX512VL/BW
VPBROADCASTB	ymmreg	mask	z, reg16	AVX512VL/BW
VPBROADCASTB	ymmreg	mask	z, reg32	AVX512VL/BW
VPBROADCASTB	ymmreg	mask	z, reg64	AVX512VL/BW

VPBROADCASTB	zmmreg mask z,reg8	AVX512BW
VPBROADCASTB	zmmreg mask z,reg16	AVX512BW
VPBROADCASTB	zmmreg mask z,reg32	AVX512BW
VPBROADCASTB	zmmreg mask z,reg64	AVX512BW
VPBROADCASTD	xmmreg mask z,mem32	AVX512VL
VPBROADCASTD	ymmreg mask z,mem32	AVX512VL
VPBROADCASTD	zmmreg mask z,mem32	AVX512
VPBROADCASTD	xmmreg mask z,xmmreg	AVX512VL
VPBROADCASTD	ymmreg mask z,xmmreg	AVX512VL
VPBROADCASTD	zmmreg mask z,xmmreg	AVX512
VPBROADCASTD	xmmreg mask z,reg32	AVX512VL
VPBROADCASTD	ymmreg mask z,reg32	AVX512VL
VPBROADCASTD	zmmreg mask z,reg32	AVX512
VPBROADCASTMB2Q	xmmreg,kreg	AVX512VL/CD
VPBROADCASTMB2Q	ymmreg,kreg	AVX512VL/CD
VPBROADCASTMB2Q	zmmreg,kreg	AVX512CD
VPBROADCASTMW2D	xmmreg,kreg	AVX512VL/CD
VPBROADCASTMW2D	ymmreg,kreg	AVX512VL/CD
VPBROADCASTMW2D	zmmreg,kreg	AVX512CD
VPBROADCASTQ	xmmreg mask z,mem64	AVX512VL
VPBROADCASTQ	ymmreg mask z,mem64	AVX512VL
VPBROADCASTQ	zmmreg mask z,mem64	AVX512
VPBROADCASTQ	xmmreg mask z,xmmreg	AVX512VL
VPBROADCASTQ	ymmreg mask z,xmmreg	AVX512VL
VPBROADCASTQ	zmmreg mask z,xmmreg	AVX512
VPBROADCASTQ	xmmreg mask z,reg64	AVX512VL
VPBROADCASTQ	ymmreg mask z,reg64	AVX512VL
VPBROADCASTQ	zmmreg mask z,reg64	AVX512
VPBROADCASTW	xmmreg mask z,xmmrm16	AVX512VL/BW
VPBROADCASTW	ymmreg mask z,xmmrm16	AVX512VL/BW
VPBROADCASTW	zmmreg mask z,xmmrm16	AVX512BW
VPBROADCASTW	xmmreg mask z,reg16	AVX512VL/BW
VPBROADCASTW	xmmreg mask z,reg32	AVX512VL/BW
VPBROADCASTW	xmmreg mask z,reg64	AVX512VL/BW
VPBROADCASTW	ymmreg mask z,reg16	AVX512VL/BW
VPBROADCASTW	ymmreg mask z,reg32	AVX512VL/BW
VPBROADCASTW	ymmreg mask z,reg64	AVX512VL/BW
VPBROADCASTW	zmmreg mask z,reg16	AVX512BW
VPBROADCASTW	zmmreg mask z,reg32	AVX512BW
VPBROADCASTW	zmmreg mask z,reg64	AVX512BW
VPCMPQEB	kreg mask,xmmreg,xmmrm128	AVX512VL/BW
VPCMPQEB	kreg mask,ymmreg,ymmrm256	AVX512VL/BW
VPCMPQEB	kreg mask,zmmreg,zmmrm512	AVX512BW
VPCMPQED	kreg mask,xmmreg,xmmrm128 b32	AVX512VL
VPCMPQED	kreg mask,ymmreg,ymmrm256 b32	AVX512VL
VPCMPQED	kreg mask,zmmreg,zmmrm512 b32	AVX512
VPCMPQEQ	kreg mask,xmmreg,xmmrm128 b64	AVX512VL
VPCMPQEQ	kreg mask,ymmreg,ymmrm256 b64	AVX512VL
VPCMPQEQ	kreg mask,zmmreg,zmmrm512 b64	AVX512
VPCMPQEW	kreg mask,xmmreg,xmmrm128	AVX512VL/BW
VPCMPQEW	kreg mask,ymmreg,ymmrm256	AVX512VL/BW
VPCMPQEW	kreg mask,zmmreg,zmmrm512	AVX512BW
VPCMPGTB	kreg mask,xmmreg,xmmrm128	AVX512VL/BW
VPCMPGTB	kreg mask,ymmreg,ymmrm256	AVX512VL/BW
VPCMPGTB	kreg mask,zmmreg,zmmrm512	AVX512BW
VPCMPGTD	kreg mask,xmmreg,xmmrm128 b32	AVX512VL
VPCMPGTD	kreg mask,ymmreg,ymmrm256 b32	AVX512VL
VPCMPGTD	kreg mask,zmmreg,zmmrm512 b32	AVX512
VPCMPGTQ	kreg mask,xmmreg,xmmrm128 b64	AVX512VL
VPCMPGTQ	kreg mask,ymmreg,ymmrm256 b64	AVX512VL

VPCMPGTQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPGTW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPGTW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPGTW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPEQB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPEQB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPEQB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPEQD	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPEQD	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPEQD	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPEQQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPEQQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL
VPCMPEQQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPQUB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPQUB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPQUB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPQUD	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPQUD	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPQUD	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPQUQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPQUQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL
VPCMPQUQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPQUW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPQUW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPQUW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPQW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPQW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPQW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPGEB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPGEB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPGEB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPGED	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPGED	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPGED	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPGEQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPGEQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL
VPCMPGEQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPGEUB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPGEUB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPGEUB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPGEUD	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPGEUD	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPGEUD	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPGEUQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPGEUQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL
VPCMPGEUQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPGEUW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPGEUW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPGEUW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPGEW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPGEW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPGEW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPGTB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPGTB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPGTB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPGTD	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPGTD	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPGTD	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPGTQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPGTQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL

VPCMPGTQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPGTUB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPGTUB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPGTUB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPGTUD	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPGTUD	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPGTUD	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPGTUQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPGTUQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL
VPCMPGTUQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPGTUW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPGTUW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPGTUW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPGTW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPGTW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPGTW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPLEB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPLEB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPLEB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPLED	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPLED	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPLED	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPLEQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPLEQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL
VPCMPLEQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPLEUB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPLEUB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPLEUB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPLEUD	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPLEUD	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPLEUD	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPLEUQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPLEUQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL
VPCMPLEUQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPLEUW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPLEUW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPLEUW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPLEW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPLEW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPLEW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPLTB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPLTB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPLTB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPLTD	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPLTD	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPLTD	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPLTQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPLTQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL
VPCMPLTQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPLTUB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPLTUB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPLTUB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPLTUD	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPLTUD	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPLTUD	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPLTUQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPLTUQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL
VPCMPLTUQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPLTUW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPLTUW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW

VPCMPLTUW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPLTW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPLTW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPLTW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPNEQB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPNEQB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPNEQB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPNEQD	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPNEQD	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPNEQD	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPNEQQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPNEQQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL
VPCMPNEQQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPNEQUB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPNEQUB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPNEQUB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPNEQUD	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPNEQUD	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPNEQUD	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPNEQUQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPNEQUQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL
VPCMPNEQUQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPNEQUW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPNEQUW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPNEQUW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPNEQW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPNEQW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPNEQW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPNGTB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPNGTB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPNGTB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPNGTD	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPNGTD	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPNGTD	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPNGTQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPNGTQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL
VPCMPNGTQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPNGTUB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPNGTUB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPNGTUB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPNGTUD	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPNGTUD	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPNGTUD	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPNGTUQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPNGTUQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL
VPCMPNGTUQ	kreg	mask, zmmreg, zmmrm512	b64 AVX512
VPCMPNGTUW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPNGTUW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPNGTUW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPNGTW	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPNGTW	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPNGTW	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPNLEB	kreg	mask, xmmreg, xmmrm128	AVX512VL/BW
VPCMPNLEB	kreg	mask, ymmreg, ymmrm256	AVX512VL/BW
VPCMPNLEB	kreg	mask, zmmreg, zmmrm512	AVX512BW
VPCMPNLED	kreg	mask, xmmreg, xmmrm128	b32 AVX512VL
VPCMPNLED	kreg	mask, ymmreg, ymmrm256	b32 AVX512VL
VPCMPNLED	kreg	mask, zmmreg, zmmrm512	b32 AVX512
VPCMPNLEQ	kreg	mask, xmmreg, xmmrm128	b64 AVX512VL
VPCMPNLEQ	kreg	mask, ymmreg, ymmrm256	b64 AVX512VL

VPCMPNLEQ	kreg	mask,zmmreg,zmmrm512	b64 AVX512
VPCMPNLEUB	kreg	mask,xmmreg,xmmrm128	AVX512VL/BW
VPCMPNLEUB	kreg	mask,ymmreg,ymmrm256	AVX512VL/BW
VPCMPNLEUB	kreg	mask,zmmreg,zmmrm512	AVX512BW
VPCMPNLEUD	kreg	mask,xmmreg,xmmrm128	b32 AVX512VL
VPCMPNLEUD	kreg	mask,ymmreg,ymmrm256	b32 AVX512VL
VPCMPNLEUD	kreg	mask,zmmreg,zmmrm512	b32 AVX512
VPCMPNLEUQ	kreg	mask,xmmreg,xmmrm128	b64 AVX512VL
VPCMPNLEUQ	kreg	mask,ymmreg,ymmrm256	b64 AVX512VL
VPCMPNLEUQ	kreg	mask,zmmreg,zmmrm512	b64 AVX512
VPCMPNLEUW	kreg	mask,xmmreg,xmmrm128	AVX512VL/BW
VPCMPNLEUW	kreg	mask,ymmreg,ymmrm256	AVX512VL/BW
VPCMPNLEUW	kreg	mask,zmmreg,zmmrm512	AVX512BW
VPCMPNLEW	kreg	mask,xmmreg,xmmrm128	AVX512VL/BW
VPCMPNLEW	kreg	mask,ymmreg,ymmrm256	AVX512VL/BW
VPCMPNLEW	kreg	mask,zmmreg,zmmrm512	AVX512BW
VPCMPNLTB	kreg	mask,xmmreg,xmmrm128	AVX512VL/BW
VPCMPNLTB	kreg	mask,ymmreg,ymmrm256	AVX512VL/BW
VPCMPNLTB	kreg	mask,zmmreg,zmmrm512	AVX512BW
VPCMPNLTD	kreg	mask,xmmreg,xmmrm128	b32 AVX512VL
VPCMPNLTD	kreg	mask,ymmreg,ymmrm256	b32 AVX512VL
VPCMPNLTD	kreg	mask,zmmreg,zmmrm512	b32 AVX512
VPCMPNLTQ	kreg	mask,xmmreg,xmmrm128	b64 AVX512VL
VPCMPNLTQ	kreg	mask,ymmreg,ymmrm256	b64 AVX512VL
VPCMPNLTQ	kreg	mask,zmmreg,zmmrm512	b64 AVX512
VPCMPNLTUB	kreg	mask,xmmreg,xmmrm128	AVX512VL/BW
VPCMPNLTUB	kreg	mask,ymmreg,ymmrm256	AVX512VL/BW
VPCMPNLTUB	kreg	mask,zmmreg,zmmrm512	AVX512BW
VPCMPNLTUD	kreg	mask,xmmreg,xmmrm128	b32 AVX512VL
VPCMPNLTUD	kreg	mask,ymmreg,ymmrm256	b32 AVX512VL
VPCMPNLTUD	kreg	mask,zmmreg,zmmrm512	b32 AVX512
VPCMPNLTUQ	kreg	mask,xmmreg,xmmrm128	b64 AVX512VL
VPCMPNLTUQ	kreg	mask,ymmreg,ymmrm256	b64 AVX512VL
VPCMPNLTUQ	kreg	mask,zmmreg,zmmrm512	b64 AVX512
VPCMPNLTUW	kreg	mask,xmmreg,xmmrm128	AVX512VL/BW
VPCMPNLTUW	kreg	mask,ymmreg,ymmrm256	AVX512VL/BW
VPCMPNLTUW	kreg	mask,zmmreg,zmmrm512	AVX512BW
VPCMPNLTW	kreg	mask,xmmreg,xmmrm128	AVX512VL/BW
VPCMPNLTW	kreg	mask,ymmreg,ymmrm256	AVX512VL/BW
VPCMPNLTW	kreg	mask,zmmreg,zmmrm512	AVX512BW
VPCMPB	kreg	mask,xmmreg,xmmrm128,imm8	AVX512VL/BW
VPCMPB	kreg	mask,ymmreg,ymmrm256,imm8	AVX512VL/BW
VPCMPB	kreg	mask,zmmreg,zmmrm512,imm8	AVX512BW
VPCMPD	kreg	mask,xmmreg,xmmrm128,b32,imm8	AVX512VL
VPCMPD	kreg	mask,ymmreg,ymmrm256,b32,imm8	AVX512VL
VPCMPD	kreg	mask,zmmreg,zmmrm512,b32,imm8	AVX512
VPCMPQ	kreg	mask,xmmreg,xmmrm128,b64,imm8	AVX512VL
VPCMPQ	kreg	mask,ymmreg,ymmrm256,b64,imm8	AVX512VL
VPCMPQ	kreg	mask,zmmreg,zmmrm512,b64,imm8	AVX512
VPCMPUB	kreg	mask,xmmreg,xmmrm128,imm8	AVX512VL/BW
VPCMPUB	kreg	mask,ymmreg,ymmrm256,imm8	AVX512VL/BW
VPCMPUB	kreg	mask,zmmreg,zmmrm512,imm8	AVX512BW
VPCMPUD	kreg	mask,xmmreg,xmmrm128,b32,imm8	AVX512VL
VPCMPUD	kreg	mask,ymmreg,ymmrm256,b32,imm8	AVX512VL
VPCMPUD	kreg	mask,zmmreg,zmmrm512,b32,imm8	AVX512
VPCMPUQ	kreg	mask,xmmreg,xmmrm128,b64,imm8	AVX512VL
VPCMPUQ	kreg	mask,ymmreg,ymmrm256,b64,imm8	AVX512VL
VPCMPUQ	kreg	mask,zmmreg,zmmrm512,b64,imm8	AVX512
VPCMPUW	kreg	mask,xmmreg,xmmrm128,imm8	AVX512VL/BW
VPCMPUW	kreg	mask,ymmreg,ymmrm256,imm8	AVX512VL/BW

VPCMPUW	kreg mask,zmmreg,zmmrm512,imm8	AVX512BW
VPCMPW	kreg mask,xmmreg,xmmrm128,imm8	AVX512VL/BW
VPCMPW	kreg mask,ymmreg,ymmrm256,imm8	AVX512VL/BW
VPCMPW	kreg mask,zmmreg,zmmrm512,imm8	AVX512BW
VPCOMPRESSD	mem128 mask,xmmreg	AVX512VL
VPCOMPRESSD	mem256 mask,ymmreg	AVX512VL
VPCOMPRESSD	mem512 mask,zmmreg	AVX512
VPCOMPRESSD	xmmreg mask z,xmmreg	AVX512VL
VPCOMPRESSD	ymmreg mask z,ymmreg	AVX512VL
VPCOMPRESSD	zmmreg mask z,zmmreg	AVX512
VPCOMPRESSQ	mem128 mask,xmmreg	AVX512VL
VPCOMPRESSQ	mem256 mask,ymmreg	AVX512VL
VPCOMPRESSQ	mem512 mask,zmmreg	AVX512
VPCOMPRESSQ	xmmreg mask z,xmmreg	AVX512VL
VPCOMPRESSQ	ymmreg mask z,ymmreg	AVX512VL
VPCOMPRESSQ	zmmreg mask z,zmmreg	AVX512
VPCONFLICTD	xmmreg mask z,xmmrm128 b32	AVX512VL/CD
VPCONFLICTD	ymmreg mask z,ymmrm256 b32	AVX512VL/CD
VPCONFLICTD	zmmreg mask z,zmmrm512 b32	AVX512CD
VPCONFLICTQ	xmmreg mask z,xmmrm128 b64	AVX512VL/CD
VPCONFLICTQ	ymmreg mask z,ymmrm256 b64	AVX512VL/CD
VPCONFLICTQ	zmmreg mask z,zmmrm512 b64	AVX512CD
PPERMB	xmmreg mask z,xmmreg*,xmmrm128	AVX512VL/VBMI
PPERMB	ymmreg mask z,ymmreg*,ymmrm256	AVX512VL/VBMI
PPERMB	zmmreg mask z,zmmreg*,zmmrm512	AVX512VBMI
PPERMD	ymmreg mask z,ymmreg*,ymmrm256 b32	AVX512VL
PPERMD	zmmreg mask z,zmmreg*,zmmrm512 b32	AVX512
PERMI2B	xmmreg mask z,xmmreg,xmmrm128	AVX512VL/VBMI
PERMI2B	ymmreg mask z,ymmreg,ymmrm256	AVX512VL/VBMI
PERMI2B	zmmreg mask z,zmmreg,zmmrm512	AVX512VBMI
PERMI2D	xmmreg mask z,xmmreg,xmmrm128 b32	AVX512VL
PERMI2D	ymmreg mask z,ymmreg,ymmrm256 b32	AVX512VL
PERMI2D	zmmreg mask z,zmmreg,zmmrm512 b32	AVX512
PERMI2PD	xmmreg mask z,xmmreg,xmmrm128 b64	AVX512VL
PERMI2PD	ymmreg mask z,ymmreg,ymmrm256 b64	AVX512VL
PERMI2PD	zmmreg mask z,zmmreg,zmmrm512 b64	AVX512
PERMI2PS	xmmreg mask z,xmmreg,xmmrm128 b32	AVX512VL
PERMI2PS	ymmreg mask z,ymmreg,ymmrm256 b32	AVX512VL
PERMI2PS	zmmreg mask z,zmmreg,zmmrm512 b32	AVX512
PERMI2Q	xmmreg mask z,xmmreg,xmmrm128 b64	AVX512VL
PERMI2Q	ymmreg mask z,ymmreg,ymmrm256 b64	AVX512VL
PERMI2Q	zmmreg mask z,zmmreg,zmmrm512 b64	AVX512
PERMI2W	xmmreg mask z,xmmreg,xmmrm128	AVX512VL/BW
PERMI2W	ymmreg mask z,ymmreg,ymmrm256	AVX512VL/BW
PERMI2W	zmmreg mask z,zmmreg,zmmrm512	AVX512BW
PERMILPD	xmmreg mask z,xmmrm128 b64,imm8	AVX512VL
PERMILPD	ymmreg mask z,ymmrm256 b64,imm8	AVX512VL
PERMILPD	zmmreg mask z,zmmrm512 b64,imm8	AVX512
PERMILPD	xmmreg mask z,xmmreg*,xmmrm128 b64	AVX512VL
PERMILPD	ymmreg mask z,ymmreg*,ymmrm256 b64	AVX512VL
PERMILPD	zmmreg mask z,zmmreg*,zmmrm512 b64	AVX512
PERMILPS	xmmreg mask z,xmmrm128 b32,imm8	AVX512VL
PERMILPS	ymmreg mask z,ymmrm256 b32,imm8	AVX512VL
PERMILPS	zmmreg mask z,zmmrm512 b32,imm8	AVX512
PERMILPS	xmmreg mask z,xmmreg*,xmmrm128 b32	AVX512VL
PERMILPS	ymmreg mask z,ymmreg*,ymmrm256 b32	AVX512VL
PERMILPS	zmmreg mask z,zmmreg*,zmmrm512 b32	AVX512
PERMPD	ymmreg mask z,ymmrm256 b64,imm8	AVX512VL
PERMPD	zmmreg mask z,zmmrm512 b64,imm8	AVX512
PERMPD	ymmreg mask z,ymmreg*,ymmrm256 b64	AVX512VL

VPERMPD	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512
VPERMPS	ymmreg	mask	z,ymmreg*,ymrm256	b32 AVX512VL
VPERMPS	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512
VPERMQ	ymmreg	mask	z,ymrm256	b64,imm8 AVX512VL
VPERMQ	zmmreg	mask	z,zmmrm512	b64,imm8 AVX512
VPERMQ	ymmreg	mask	z,ymmreg*,ymrm256	b64 AVX512VL
VPERMQ	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512
VPERMT2B	xmmreg	mask	z,xmmreg,xmmrm128	AVX512VL/VBMI
VPERMT2B	ymmreg	mask	z,ymmreg,ymrm256	AVX512VL/VBMI
VPERMT2B	zmmreg	mask	z,zmmreg,zmmrm512	AVX512VBMI
VPERMT2D	xmmreg	mask	z,xmmreg,xmmrm128	b32 AVX512VL
VPERMT2D	ymmreg	mask	z,ymmreg,ymrm256	b32 AVX512VL
VPERMT2D	zmmreg	mask	z,zmmreg,zmmrm512	b32 AVX512
VPERMT2PD	xmmreg	mask	z,xmmreg,xmmrm128	b64 AVX512VL
VPERMT2PD	ymmreg	mask	z,ymmreg,ymrm256	b64 AVX512VL
VPERMT2PD	zmmreg	mask	z,zmmreg,zmmrm512	b64 AVX512
VPERMT2PS	xmmreg	mask	z,xmmreg,xmmrm128	b32 AVX512VL
VPERMT2PS	ymmreg	mask	z,ymmreg,ymrm256	b32 AVX512VL
VPERMT2PS	zmmreg	mask	z,zmmreg,zmmrm512	b32 AVX512
VPERMT2Q	xmmreg	mask	z,xmmreg,xmmrm128	b64 AVX512VL
VPERMT2Q	ymmreg	mask	z,ymmreg,ymrm256	b64 AVX512VL
VPERMT2Q	zmmreg	mask	z,zmmreg,zmmrm512	b64 AVX512
VPERMT2W	xmmreg	mask	z,xmmreg,xmmrm128	AVX512VL/BW
VPERMT2W	ymmreg	mask	z,ymmreg,ymrm256	AVX512VL/BW
VPERMT2W	zmmreg	mask	z,zmmreg,zmmrm512	AVX512BW
VPERMW	xmmreg	mask	z,xmmreg*,xmmrm128	AVX512VL/BW
VPERMW	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VL/BW
VPERMW	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VEXPANDD	xmmreg	mask	z,mem128	AVX512VL
VEXPANDD	ymmreg	mask	z,mem256	AVX512VL
VEXPANDD	zmmreg	mask	z,mem512	AVX512
VEXPANDD	xmmreg	mask	z,xmmreg	AVX512VL
VEXPANDD	ymmreg	mask	z,ymmreg	AVX512VL
VEXPANDD	zmmreg	mask	z,zmmreg	AVX512
VEXPANDQ	xmmreg	mask	z,mem128	AVX512VL
VEXPANDQ	ymmreg	mask	z,mem256	AVX512VL
VEXPANDQ	zmmreg	mask	z,mem512	AVX512
VEXPANDQ	xmmreg	mask	z,xmmreg	AVX512VL
VEXPANDQ	ymmreg	mask	z,ymmreg	AVX512VL
VEXPANDQ	zmmreg	mask	z,zmmreg	AVX512
VPEXTRB	reg8,xmmreg,imm8			AVX512BW
VPEXTRB	reg16,xmmreg,imm8			AVX512BW
VPEXTRB	reg32,xmmreg,imm8			AVX512BW
VPEXTRB	reg64,xmmreg,imm8			AVX512BW
VPEXTRB	mem8,xmmreg,imm8			AVX512BW
VPEXTRD	rm32,xmmreg,imm8			AVX512DQ
VPEXTRQ	rm64,xmmreg,imm8			AVX512DQ
VPEXTRW	reg16,xmmreg,imm8			AVX512BW
VPEXTRW	reg32,xmmreg,imm8			AVX512BW
VPEXTRW	reg64,xmmreg,imm8			AVX512BW
VPEXTRW	mem16,xmmreg,imm8			AVX512BW
VPEXTRW	reg16,xmmreg,imm8			AVX512BW
VPEXTRW	reg32,xmmreg,imm8			AVX512BW
VPEXTRW	reg64,xmmreg,imm8			AVX512BW
VPGATHERDD	xmmreg	mask,xmem32		AVX512VL
VPGATHERDD	ymmreg	mask,ymem32		AVX512VL
VPGATHERDD	zmmreg	mask,zmem32		AVX512
VPGATHERDQ	xmmreg	mask,xmem64		AVX512VL
VPGATHERDQ	ymmreg	mask,xmem64		AVX512VL
VPGATHERDQ	zmmreg	mask,ymem64		AVX512

VPGATHERQD	xmmreg	mask,xmem32	AVX512VL
VPGATHERQD	xmmreg	mask,ymem32	AVX512VL
VPGATHERQD	ymmreg	mask,zmem32	AVX512
VPGATHERQQ	xmmreg	mask,xmem64	AVX512VL
VPGATHERQQ	ymmreg	mask,ymem64	AVX512VL
VPGATHERQQ	zmmreg	mask,zmem64	AVX512
VPINSRB	xmmreg,xmmreg*,reg32,imm8	AVX512BW	
VPINSRB	xmmreg,xmmreg*,mem8,imm8	AVX512BW	
VPINSRD	xmmreg,xmmreg*,rm32,imm8	AVX512DQ	
VPINSRQ	xmmreg,xmmreg*,rm64,imm8	AVX512DQ	
VPINSRW	xmmreg,xmmreg*,reg32,imm8	AVX512BW	
VPINSRW	xmmreg,xmmreg*,mem16,imm8	AVX512BW	
VPLZCNTD	xmmreg	mask z,xmmrm128 b32	AVX512VL/CD
VPLZCNTD	ymmreg	mask z,ymrm256 b32	AVX512VL/CD
VPLZCNTD	zmmreg	mask z,zmmrm512 b32	AVX512CD
VPLZCNTQ	xmmreg	mask z,xmmrm128 b64	AVX512VL/CD
VPLZCNTQ	ymmreg	mask z,ymrm256 b64	AVX512VL/CD
VPLZCNTQ	zmmreg	mask z,zmmrm512 b64	AVX512CD
VPADD52HUQ	xmmreg	mask z,xmmreg,xmmrm128 b64	AVX512VL/IFMA
VPADD52HUQ	ymmreg	mask z,ymmreg,ymrm256 b64	AVX512VL/IFMA
VPADD52HUQ	zmmreg	mask z,zmmreg,zmmrm512 b64	AVX512IFMA
VPADD52LUQ	xmmreg	mask z,xmmreg,xmmrm128 b64	AVX512VL/IFMA
VPADD52LUQ	ymmreg	mask z,ymmreg,ymrm256 b64	AVX512VL/IFMA
VPADD52LUQ	zmmreg	mask z,zmmreg,zmmrm512 b64	AVX512IFMA
VPADDUBSW	xmmreg	mask z,xmmreg*,xmmrm128	AVX512VL/BW
VPADDUBSW	ymmreg	mask z,ymmreg*,ymrm256	AVX512VL/BW
VPADDUBSW	zmmreg	mask z,zmmreg*,zmmrm512	AVX512BW
VPADDWD	xmmreg	mask z,xmmreg*,xmmrm128	AVX512VL/BW
VPADDWD	ymmreg	mask z,ymmreg*,ymrm256	AVX512VL/BW
VPADDWD	zmmreg	mask z,zmmreg*,zmmrm512	AVX512BW
VPASB	xmmreg	mask z,xmmreg*,xmmrm128	AVX512VL/BW
VPASB	ymmreg	mask z,ymmreg*,ymrm256	AVX512VL/BW
VPASB	zmmreg	mask z,zmmreg*,zmmrm512	AVX512BW
VPASD	xmmreg	mask z,xmmreg*,xmmrm128 b32	AVX512VL
VPASD	ymmreg	mask z,ymmreg*,ymrm256 b32	AVX512VL
VPASD	zmmreg	mask z,zmmreg*,zmmrm512 b32	AVX512
VPASQ	xmmreg	mask z,xmmreg*,xmmrm128 b64	AVX512VL
VPASQ	ymmreg	mask z,ymmreg*,ymrm256 b64	AVX512VL
VPASQ	zmmreg	mask z,zmmreg*,zmmrm512 b64	AVX512
VPASW	xmmreg	mask z,xmmreg*,xmmrm128	AVX512VL/BW
VPASW	ymmreg	mask z,ymmreg*,ymrm256	AVX512VL/BW
VPASW	zmmreg	mask z,zmmreg*,zmmrm512	AVX512BW
VPASUB	xmmreg	mask z,xmmreg*,xmmrm128	AVX512VL/BW
VPASUB	ymmreg	mask z,ymmreg*,ymrm256	AVX512VL/BW
VPASUB	zmmreg	mask z,zmmreg*,zmmrm512	AVX512BW
VPASUD	xmmreg	mask z,xmmreg*,xmmrm128 b32	AVX512VL
VPASUD	ymmreg	mask z,ymmreg*,ymrm256 b32	AVX512VL
VPASUD	zmmreg	mask z,zmmreg*,zmmrm512 b32	AVX512
VPASUQ	xmmreg	mask z,xmmreg*,xmmrm128 b64	AVX512VL
VPASUQ	ymmreg	mask z,ymmreg*,ymrm256 b64	AVX512VL
VPASUQ	zmmreg	mask z,zmmreg*,zmmrm512 b64	AVX512
VPASUW	xmmreg	mask z,xmmreg*,xmmrm128	AVX512VL/BW
VPASUW	ymmreg	mask z,ymmreg*,ymrm256	AVX512VL/BW
VPASUW	zmmreg	mask z,zmmreg*,zmmrm512	AVX512BW
VPASB	xmmreg	mask z,xmmreg*,xmmrm128	AVX512VL/BW
VPASB	ymmreg	mask z,ymmreg*,ymrm256	AVX512VL/BW
VPASB	zmmreg	mask z,zmmreg*,zmmrm512	AVX512BW
VPASD	xmmreg	mask z,xmmreg*,xmmrm128 b32	AVX512VL
VPASD	ymmreg	mask z,ymmreg*,ymrm256 b32	AVX512VL
VPASD	zmmreg	mask z,zmmreg*,zmmrm512 b32	AVX512

VPMINSQ	xmmreg mask z,xmmreg*,xmrm128 b64	AVX512VL
VPMINSQ	ymmreg mask z,ymmreg*,ymrm256 b64	AVX512VL
VPMINSQ	zmmreg mask z,zmmreg*,zmmrm512 b64	AVX512
VPMINSW	xmmreg mask z,xmmreg*,xmrm128	AVX512VL/BW
VPMINSW	ymmreg mask z,ymmreg*,ymrm256	AVX512VL/BW
VPMINSW	zmmreg mask z,zmmreg*,zmmrm512	AVX512BW
VPMINUB	xmmreg mask z,xmmreg*,xmrm128	AVX512VL/BW
VPMINUB	ymmreg mask z,ymmreg*,ymrm256	AVX512VL/BW
VPMINUB	zmmreg mask z,zmmreg*,zmmrm512	AVX512BW
VPMINUD	xmmreg mask z,xmmreg*,xmrm128 b32	AVX512VL
VPMINUD	ymmreg mask z,ymmreg*,ymrm256 b32	AVX512VL
VPMINUD	zmmreg mask z,zmmreg*,zmmrm512 b32	AVX512
VPMINUQ	xmmreg mask z,xmmreg*,xmrm128 b64	AVX512VL
VPMINUQ	ymmreg mask z,ymmreg*,ymrm256 b64	AVX512VL
VPMINUQ	zmmreg mask z,zmmreg*,zmmrm512 b64	AVX512
VPMINUW	xmmreg mask z,xmmreg*,xmrm128	AVX512VL/BW
VPMINUW	ymmreg mask z,ymmreg*,ymrm256	AVX512VL/BW
VPMINUW	zmmreg mask z,zmmreg*,zmmrm512	AVX512BW
VPMOVB2M	kreg,xmmreg	AVX512VL/BW
VPMOVB2M	kreg,ymmreg	AVX512VL/BW
VPMOVB2M	kreg,zmmreg	AVX512BW
VPMOVD2M	kreg,xmmreg	AVX512VL/DQ
VPMOVD2M	kreg,ymmreg	AVX512VL/DQ
VPMOVD2M	kreg,zmmreg	AVX512DQ
VPMOVBDB	xmmreg mask z,xmmreg	AVX512VL
VPMOVBDB	xmmreg mask z,ymmreg	AVX512VL
VPMOVBDB	xmmreg mask z,zmmreg	AVX512
VPMOVBDB	mem32 mask,xmmreg	AVX512VL
VPMOVBDB	mem64 mask,ymmreg	AVX512VL
VPMOVBDB	mem128 mask,zmmreg	AVX512
VPMOVDW	xmmreg mask z,xmmreg	AVX512VL
VPMOVDW	xmmreg mask z,ymmreg	AVX512VL
VPMOVDW	ymmreg mask z,zmmreg	AVX512
VPMOVDW	mem64 mask,xmmreg	AVX512VL
VPMOVDW	mem128 mask,ymmreg	AVX512VL
VPMOVDW	mem256 mask,zmmreg	AVX512
VPMOVM2B	xmmreg,kreg	AVX512VL/BW
VPMOVM2B	ymmreg,kreg	AVX512VL/BW
VPMOVM2B	zmmreg,kreg	AVX512BW
VPMOVM2D	xmmreg,kreg	AVX512VL/DQ
VPMOVM2D	ymmreg,kreg	AVX512VL/DQ
VPMOVM2D	zmmreg,kreg	AVX512DQ
VPMOVM2Q	xmmreg,kreg	AVX512VL/DQ
VPMOVM2Q	ymmreg,kreg	AVX512VL/DQ
VPMOVM2Q	zmmreg,kreg	AVX512DQ
VPMOVM2W	xmmreg,kreg	AVX512VL/BW
VPMOVM2W	ymmreg,kreg	AVX512VL/BW
VPMOVM2W	zmmreg,kreg	AVX512BW
VPMOVQ2M	kreg,xmmreg	AVX512VL/DQ
VPMOVQ2M	kreg,ymmreg	AVX512VL/DQ
VPMOVQ2M	kreg,zmmreg	AVX512DQ
VPMOVQB	xmmreg mask z,xmmreg	AVX512VL
VPMOVQB	xmmreg mask z,ymmreg	AVX512VL
VPMOVQB	xmmreg mask z,zmmreg	AVX512
VPMOVQB	mem16 mask,xmmreg	AVX512VL
VPMOVQB	mem32 mask,ymmreg	AVX512VL
VPMOVQB	mem64 mask,zmmreg	AVX512
VPMOVQD	xmmreg mask z,xmmreg	AVX512VL
VPMOVQD	xmmreg mask z,ymmreg	AVX512VL
VPMOVQD	ymmreg mask z,zmmreg	AVX512

VPMOVQD	mem64	mask, xmmreg	AVX512VL
VPMOVQD	mem128	mask, ymmreg	AVX512VL
VPMOVQD	mem256	mask, zmmreg	AVX512
VPMOVQW	xmmreg	mask z, xmmreg	AVX512VL
VPMOVQW	xmmreg	mask z, ymmreg	AVX512VL
VPMOVQW	xmmreg	mask z, zmmreg	AVX512
VPMOVQW	mem32	mask, xmmreg	AVX512VL
VPMOVQW	mem64	mask, ymmreg	AVX512VL
VPMOVQW	mem128	mask, zmmreg	AVX512
VPMOVSDB	xmmreg	mask z, xmmreg	AVX512VL
VPMOVSDB	xmmreg	mask z, ymmreg	AVX512VL
VPMOVSDB	xmmreg	mask z, zmmreg	AVX512
VPMOVSDB	mem32	mask, xmmreg	AVX512VL
VPMOVSDB	mem64	mask, ymmreg	AVX512VL
VPMOVSDB	mem128	mask, zmmreg	AVX512
VPMOVSDW	xmmreg	mask z, xmmreg	AVX512VL
VPMOVSDW	xmmreg	mask z, ymmreg	AVX512VL
VPMOVSDW	ymmreg	mask z, zmmreg	AVX512
VPMOVSDW	mem64	mask, xmmreg	AVX512VL
VPMOVSDW	mem128	mask, ymmreg	AVX512VL
VPMOVSDW	mem256	mask, zmmreg	AVX512
VPMOVSQB	xmmreg	mask z, xmmreg	AVX512VL
VPMOVSQB	xmmreg	mask z, ymmreg	AVX512VL
VPMOVSQB	xmmreg	mask z, zmmreg	AVX512
VPMOVSQB	mem16	mask, xmmreg	AVX512VL
VPMOVSQB	mem32	mask, ymmreg	AVX512VL
VPMOVSQB	mem64	mask, zmmreg	AVX512
VPMOVSQD	xmmreg	mask z, xmmreg	AVX512VL
VPMOVSQD	xmmreg	mask z, ymmreg	AVX512VL
VPMOVSQD	ymmreg	mask z, zmmreg	AVX512
VPMOVSQD	mem64	mask, xmmreg	AVX512VL
VPMOVSQD	mem128	mask, ymmreg	AVX512VL
VPMOVSQD	mem256	mask, zmmreg	AVX512
VPMOVSQW	xmmreg	mask z, xmmreg	AVX512VL
VPMOVSQW	xmmreg	mask z, ymmreg	AVX512VL
VPMOVSQW	xmmreg	mask z, zmmreg	AVX512
VPMOVSQW	mem32	mask, xmmreg	AVX512VL
VPMOVSQW	mem64	mask, ymmreg	AVX512VL
VPMOVSQW	mem128	mask, zmmreg	AVX512
VPMOVSWB	xmmreg	mask z, xmmreg	AVX512VL/BW
VPMOVSWB	xmmreg	mask z, ymmreg	AVX512VL/BW
VPMOVSWB	ymmreg	mask z, zmmreg	AVX512BW
VPMOVSWB	mem64	mask, xmmreg	AVX512VL/BW
VPMOVSWB	mem128	mask, ymmreg	AVX512VL/BW
VPMOVSWB	mem256	mask, zmmreg	AVX512BW
VPMOVXBD	xmmreg	mask z, xmmrm32	AVX512VL
VPMOVXBD	ymmreg	mask z, xmmrm64	AVX512VL
VPMOVXBD	zmmreg	mask z, xmmrm128	AVX512
VPMOVXBD	xmmreg	mask z, xmmrm16	AVX512VL
VPMOVXBD	ymmreg	mask z, xmmrm32	AVX512VL
VPMOVXBD	zmmreg	mask z, xmmrm64	AVX512
VPMOVXBD	xmmreg	mask z, xmmrm64	AVX512VL/BW
VPMOVXBD	ymmreg	mask z, xmmrm128	AVX512VL/BW
VPMOVXBD	zmmreg	mask z, ymmrm256	AVX512BW
VPMOVXBD	xmmreg	mask z, xmmrm64	AVX512VL
VPMOVXBD	ymmreg	mask z, xmmrm128	AVX512VL
VPMOVXBD	zmmreg	mask z, ymmrm256	AVX512
VPMOVXBD	xmmreg	mask z, xmmrm64	AVX512VL
VPMOVXBD	ymmreg	mask z, xmmrm128	AVX512VL
VPMOVXBD	zmmreg	mask z, ymmrm256	AVX512
VPMOVXBD	xmmreg	mask z, xmmrm64	AVX512VL
VPMOVXBD	ymmreg	mask z, xmmrm128	AVX512VL
VPMOVXBD	zmmreg	mask z, ymmrm256	AVX512

VPMOVSXWQ	xmmreg mask z,xmmrm32	AVX512VL
VPMOVSXWQ	ymmreg mask z,xmmrm64	AVX512VL
VPMOVSXWQ	zmmreg mask z,xmmrm128	AVX512
VPMOVUSDB	xmmreg mask z,xmmreg	AVX512VL
VPMOVUSDB	xmmreg mask z,ymmreg	AVX512VL
VPMOVUSDB	xmmreg mask z,zmmreg	AVX512
VPMOVUSDB	mem32 mask,xmmreg	AVX512VL
VPMOVUSDB	mem64 mask,ymmreg	AVX512VL
VPMOVUSDB	mem128 mask,zmmreg	AVX512
VPMOVUSDW	xmmreg mask z,xmmreg	AVX512VL
VPMOVUSDW	xmmreg mask z,ymmreg	AVX512VL
VPMOVUSDW	ymmreg mask z,zmmreg	AVX512
VPMOVUSDW	mem64 mask,xmmreg	AVX512VL
VPMOVUSDW	mem128 mask,ymmreg	AVX512VL
VPMOVUSDW	mem256 mask,zmmreg	AVX512
VPMOVUSQB	xmmreg mask z,xmmreg	AVX512VL
VPMOVUSQB	xmmreg mask z,ymmreg	AVX512VL
VPMOVUSQB	xmmreg mask z,zmmreg	AVX512
VPMOVUSQB	mem16 mask,xmmreg	AVX512VL
VPMOVUSQB	mem32 mask,ymmreg	AVX512VL
VPMOVUSQB	mem64 mask,zmmreg	AVX512
VPMOVUSQD	xmmreg mask z,xmmreg	AVX512VL
VPMOVUSQD	xmmreg mask z,ymmreg	AVX512VL
VPMOVUSQD	ymmreg mask z,zmmreg	AVX512
VPMOVUSQD	mem64 mask,xmmreg	AVX512VL
VPMOVUSQD	mem128 mask,ymmreg	AVX512VL
VPMOVUSQD	mem256 mask,zmmreg	AVX512
VPMOVUSQW	xmmreg mask z,xmmreg	AVX512VL
VPMOVUSQW	xmmreg mask z,ymmreg	AVX512VL
VPMOVUSQW	xmmreg mask z,zmmreg	AVX512
VPMOVUSQW	mem32 mask,xmmreg	AVX512VL
VPMOVUSQW	mem64 mask,ymmreg	AVX512VL
VPMOVUSQW	mem128 mask,zmmreg	AVX512
VPMOVUSWB	xmmreg mask z,xmmreg	AVX512VL/BW
VPMOVUSWB	xmmreg mask z,ymmreg	AVX512VL/BW
VPMOVUSWB	ymmreg mask z,zmmreg	AVX512BW
VPMOVUSWB	mem64 mask,xmmreg	AVX512VL/BW
VPMOVUSWB	mem128 mask,ymmreg	AVX512VL/BW
VPMOVUSWB	mem256 mask,zmmreg	AVX512BW
VPMOVW2M	kreg,xmmreg	AVX512VL/BW
VPMOVW2M	kreg,ymmreg	AVX512VL/BW
VPMOVW2M	kreg,zmmreg	AVX512BW
VPMOVWB	xmmreg mask z,xmmreg	AVX512VL/BW
VPMOVWB	xmmreg mask z,ymmreg	AVX512VL/BW
VPMOVWB	ymmreg mask z,zmmreg	AVX512BW
VPMOVWB	mem64 mask,xmmreg	AVX512VL/BW
VPMOVWB	mem128 mask,ymmreg	AVX512VL/BW
VPMOVWB	mem256 mask,zmmreg	AVX512BW
VPMOVZXBD	xmmreg mask z,xmmrm32	AVX512VL
VPMOVZXBD	ymmreg mask z,xmmrm64	AVX512VL
VPMOVZXBD	zmmreg mask z,xmmrm128	AVX512
VPMOVZXBQ	xmmreg mask z,xmmrm16	AVX512VL
VPMOVZXBQ	ymmreg mask z,xmmrm32	AVX512VL
VPMOVZXBQ	zmmreg mask z,xmmrm64	AVX512
VPMOVZXBW	xmmreg mask z,xmmrm64	AVX512VL/BW
VPMOVZXBW	ymmreg mask z,xmmrm128	AVX512VL/BW
VPMOVZXBW	zmmreg mask z,ymmrm256	AVX512BW
VPMOVZXDQ	xmmreg mask z,xmmrm64	AVX512VL
VPMOVZXDQ	ymmreg mask z,xmmrm128	AVX512VL
VPMOVZXDQ	zmmreg mask z,ymmrm256	AVX512

VPMOVZXWD	xmmreg	mask	z,xmmrm64	AVX512VL
VPMOVZXWD	ymmreg	mask	z,xmmrm128	AVX512VL
VPMOVZXWD	zmmreg	mask	z,ymmrm256	AVX512
VPMOVZXWQ	xmmreg	mask	z,xmmrm32	AVX512VL
VPMOVZXWQ	ymmreg	mask	z,xmmrm64	AVX512VL
VPMOVZXWQ	zmmreg	mask	z,xmmrm128	AVX512
VPMULDQ	xmmreg	mask	z,xmmreg*,xmmrm128	b64 AVX512VL
VPMULDQ	ymmreg	mask	z,ymmreg*,ymmrm256	b64 AVX512VL
VPMULDQ	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512
VPMULHSW	xmmreg	mask	z,xmmreg*,xmmrm128	AVX512VL/BW
VPMULHSW	ymmreg	mask	z,ymmreg*,ymmrm256	AVX512VL/BW
VPMULHSW	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPMULHUW	xmmreg	mask	z,xmmreg*,xmmrm128	AVX512VL/BW
VPMULHUW	ymmreg	mask	z,ymmreg*,ymmrm256	AVX512VL/BW
VPMULHUW	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPMULHW	xmmreg	mask	z,xmmreg*,xmmrm128	AVX512VL/BW
VPMULHW	ymmreg	mask	z,ymmreg*,ymmrm256	AVX512VL/BW
VPMULHW	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPMULLD	xmmreg	mask	z,xmmreg*,xmmrm128	b32 AVX512VL
VPMULLD	ymmreg	mask	z,ymmreg*,ymmrm256	b32 AVX512VL
VPMULLD	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512
VPMULLQ	xmmreg	mask	z,xmmreg*,xmmrm128	b64 AVX512VL/DQ
VPMULLQ	ymmreg	mask	z,ymmreg*,ymmrm256	b64 AVX512VL/DQ
VPMULLQ	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512DQ
VPMULLW	xmmreg	mask	z,xmmreg*,xmmrm128	AVX512VL/BW
VPMULLW	ymmreg	mask	z,ymmreg*,ymmrm256	AVX512VL/BW
VPMULLW	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPMULTISHIFTQB	xmmreg	mask	z,xmmreg*,xmmrm128	b64 AVX512VL/VBMI
VPMULTISHIFTQB	ymmreg	mask	z,ymmreg*,ymmrm256	b64 AVX512VL/VBMI
VPMULTISHIFTQB	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512VBMI
VPMULUDQ	xmmreg	mask	z,xmmreg*,xmmrm128	b64 AVX512VL
VPMULUDQ	ymmreg	mask	z,ymmreg*,ymmrm256	b64 AVX512VL
VPMULUDQ	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512
VPORD	xmmreg	mask	z,xmmreg*,xmmrm128	b32 AVX512VL
VPORD	ymmreg	mask	z,ymmreg*,ymmrm256	b32 AVX512VL
VPORD	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512
VPORQ	xmmreg	mask	z,xmmreg*,xmmrm128	b64 AVX512VL
VPORQ	ymmreg	mask	z,ymmreg*,ymmrm256	b64 AVX512VL
VPORQ	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512
VPROLD	xmmreg	mask	z,xmmrm128 b32*,imm8	AVX512VL
VPROLD	ymmreg	mask	z,ymmrm256 b32*,imm8	AVX512VL
VPROLD	zmmreg	mask	z,zmmrm512 b32*,imm8	AVX512
VPROLQ	xmmreg	mask	z,xmmrm128 b64*,imm8	AVX512VL
VPROLQ	ymmreg	mask	z,ymmrm256 b64*,imm8	AVX512VL
VPROLQ	zmmreg	mask	z,zmmrm512 b64*,imm8	AVX512
VPROLVD	xmmreg	mask	z,xmmreg*,xmmrm128	b32 AVX512VL
VPROLVD	ymmreg	mask	z,ymmreg*,ymmrm256	b32 AVX512VL
VPROLVD	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512
VPROLVQ	xmmreg	mask	z,xmmreg*,xmmrm128	b64 AVX512VL
VPROLVQ	ymmreg	mask	z,ymmreg*,ymmrm256	b64 AVX512VL
VPROLVQ	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512
VPRORD	xmmreg	mask	z,xmmrm128 b32*,imm8	AVX512VL
VPRORD	ymmreg	mask	z,ymmrm256 b32*,imm8	AVX512VL
VPRORD	zmmreg	mask	z,zmmrm512 b32*,imm8	AVX512
VPRORQ	xmmreg	mask	z,xmmrm128 b64*,imm8	AVX512VL
VPRORQ	ymmreg	mask	z,ymmrm256 b64*,imm8	AVX512VL
VPRORQ	zmmreg	mask	z,zmmrm512 b64*,imm8	AVX512
VPRORVD	xmmreg	mask	z,xmmreg*,xmmrm128	b32 AVX512VL
VPRORVD	ymmreg	mask	z,ymmreg*,ymmrm256	b32 AVX512VL
VPRORVD	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512

VPRORVQ	xmmreg	mask	z,xmmreg*,xmrm128	b64 AVX512VL
VPRORVQ	ymmreg	mask	z,ymmreg*,ymrm256	b64 AVX512VL
VPRORVQ	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512
VPSADBW	xmmreg,xmmreg*,xmrm128			AVX512VL/BW
VPSADBW	ymmreg,ymmreg*,ymrm256			AVX512VL/BW
VPSADBW	zmmreg,zmmreg*,zmmrm512			AVX512BW
VPSCATTERDD	xmem32	mask,xmmreg		AVX512VL
VPSCATTERDD	yem32	mask,ymmreg		AVX512VL
VPSCATTERDD	zmem32	mask,zmmreg		AVX512
VPSCATTERDQ	xmem64	mask,xmmreg		AVX512VL
VPSCATTERDQ	xmem64	mask,ymmreg		AVX512VL
VPSCATTERDQ	yem64	mask,zmmreg		AVX512
VPSCATTERQD	xmem32	mask,xmmreg		AVX512VL
VPSCATTERQD	yem32	mask,xmmreg		AVX512VL
VPSCATTERQD	zmem32	mask,ymmreg		AVX512
VPSCATTERQQ	xmem64	mask,xmmreg		AVX512VL
VPSCATTERQQ	yem64	mask,ymmreg		AVX512VL
VPSCATTERQQ	zmem64	mask,zmmreg		AVX512
VPSHUFB	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPSHUFB	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VL/BW
VPSHUFB	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPSHUFD	xmmreg	mask	z,xmrm128	b32,imm8 AVX512VL
VPSHUFD	ymmreg	mask	z,ymrm256	b32,imm8 AVX512VL
VPSHUFD	zmmreg	mask	z,zmmrm512	b32,imm8 AVX512
VPSHUFHW	xmmreg	mask	z,xmrm128,imm8	AVX512VL/BW
VPSHUFHW	ymmreg	mask	z,ymrm256,imm8	AVX512VL/BW
VPSHUFHW	zmmreg	mask	z,zmmrm512,imm8	AVX512BW
VPSHUFLW	xmmreg	mask	z,xmrm128,imm8	AVX512VL/BW
VPSHUFLW	ymmreg	mask	z,ymrm256,imm8	AVX512VL/BW
VPSHUFLW	zmmreg	mask	z,zmmrm512,imm8	AVX512BW
VPSLLD	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL
VPSLLD	ymmreg	mask	z,ymmreg*,xmrm128	AVX512VL
VPSLLD	zmmreg	mask	z,zmmreg*,xmrm128	AVX512
VPSLLD	xmmreg	mask	z,xmrm128	b32*,imm8 AVX512VL
VPSLLD	ymmreg	mask	z,ymrm256	b32*,imm8 AVX512VL
VPSLLD	zmmreg	mask	z,zmmrm512	b32*,imm8 AVX512
VPSLLDQ	xmmreg,xmrm128*,imm8			AVX512VL/BW
VPSLLDQ	ymmreg,ymrm256*,imm8			AVX512VL/BW
VPSLLDQ	zmmreg,zmmrm512*,imm8			AVX512BW
VPSLLQ	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL
VPSLLQ	ymmreg	mask	z,ymmreg*,xmrm128	AVX512VL
VPSLLQ	zmmreg	mask	z,zmmreg*,xmrm128	AVX512
VPSLLQ	xmmreg	mask	z,xmrm128	b64*,imm8 AVX512VL
VPSLLQ	ymmreg	mask	z,ymrm256	b64*,imm8 AVX512VL
VPSLLQ	zmmreg	mask	z,zmmrm512	b64*,imm8 AVX512
VPSLLVD	xmmreg	mask	z,xmmreg*,xmrm128	b32 AVX512VL
VPSLLVD	ymmreg	mask	z,ymmreg*,ymrm256	b32 AVX512VL
VPSLLVD	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512
VPSLLVQ	xmmreg	mask	z,xmmreg*,xmrm128	b64 AVX512VL
VPSLLVQ	ymmreg	mask	z,ymmreg*,ymrm256	b64 AVX512VL
VPSLLVQ	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512
VPSLLVW	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPSLLVW	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VL/BW
VPSLLVW	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPSLLW	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPSLLW	ymmreg	mask	z,ymmreg*,xmrm128	AVX512VL/BW
VPSLLW	zmmreg	mask	z,zmmreg*,xmrm128	AVX512BW
VPSLLW	xmmreg	mask	z,xmrm128*,imm8	AVX512VL/BW
VPSLLW	ymmreg	mask	z,ymrm256*,imm8	AVX512VL/BW
VPSLLW	zmmreg	mask	z,zmmrm512*,imm8	AVX512BW

VPSRAD	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL
VPSRAD	ymmreg	mask	z,ymmreg*,xmrm128	AVX512VL
VPSRAD	zmmreg	mask	z,zmmreg*,xmrm128	AVX512
VPSRAD	xmmreg	mask	z,xmrm128 b32*,imm8	AVX512VL
VPSRAD	ymmreg	mask	z,yymmrm256 b32*,imm8	AVX512VL
VPSRAD	zmmreg	mask	z,zmrm512 b32*,imm8	AVX512
VPSRAQ	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL
VPSRAQ	ymmreg	mask	z,ymmreg*,xmrm128	AVX512VL
VPSRAQ	zmmreg	mask	z,zmmreg*,xmrm128	AVX512
VPSRAQ	xmmreg	mask	z,xmrm128 b64*,imm8	AVX512VL
VPSRAQ	ymmreg	mask	z,yymmrm256 b64*,imm8	AVX512VL
VPSRAQ	zmmreg	mask	z,zmrm512 b64*,imm8	AVX512
VPSRAVD	xmmreg	mask	z,xmmreg*,xmrm128 b32	AVX512VL
VPSRAVD	ymmreg	mask	z,ymmreg*,ymmrm256 b32	AVX512VL
VPSRAVD	zmmreg	mask	z,zmmreg*,zmrm512 b32	AVX512
VPSRAVQ	xmmreg	mask	z,xmmreg*,xmrm128 b64	AVX512VL
VPSRAVQ	ymmreg	mask	z,ymmreg*,ymmrm256 b64	AVX512VL
VPSRAVQ	zmmreg	mask	z,zmmreg*,zmrm512 b64	AVX512
VPSRAVW	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPSRAVW	ymmreg	mask	z,ymmreg*,ymmrm256	AVX512VL/BW
VPSRAVW	zmmreg	mask	z,zmmreg*,zmrm512	AVX512BW
VPSRAW	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPSRAW	ymmreg	mask	z,ymmreg*,xmrm128	AVX512VL/BW
VPSRAW	zmmreg	mask	z,zmmreg*,xmrm128	AVX512BW
VPSRAW	xmmreg	mask	z,xmrm128*,imm8	AVX512VL/BW
VPSRAW	ymmreg	mask	z,yymmrm256*,imm8	AVX512VL/BW
VPSRAW	zmmreg	mask	z,zmrm512*,imm8	AVX512BW
VPSRLD	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL
VPSRLD	ymmreg	mask	z,ymmreg*,xmrm128	AVX512VL
VPSRLD	zmmreg	mask	z,zmmreg*,xmrm128	AVX512
VPSRLD	xmmreg	mask	z,xmrm128 b32*,imm8	AVX512VL
VPSRLD	ymmreg	mask	z,yymmrm256 b32*,imm8	AVX512VL
VPSRLD	zmmreg	mask	z,zmrm512 b32*,imm8	AVX512
VPSRLDQ	xmmreg		xmrm128*,imm8	AVX512VL/BW
VPSRLDQ	ymmreg		yymmrm256*,imm8	AVX512VL/BW
VPSRLDQ	zmmreg		zmrm512*,imm8	AVX512BW
VPSRLQ	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL
VPSRLQ	ymmreg	mask	z,ymmreg*,xmrm128	AVX512VL
VPSRLQ	zmmreg	mask	z,zmmreg*,xmrm128	AVX512
VPSRLQ	xmmreg	mask	z,xmrm128 b64*,imm8	AVX512VL
VPSRLQ	ymmreg	mask	z,yymmrm256 b64*,imm8	AVX512VL
VPSRLQ	zmmreg	mask	z,zmrm512 b64*,imm8	AVX512
VPSRLVD	xmmreg	mask	z,xmmreg*,xmrm128 b32	AVX512VL
VPSRLVD	ymmreg	mask	z,ymmreg*,ymmrm256 b32	AVX512VL
VPSRLVD	zmmreg	mask	z,zmmreg*,zmrm512 b32	AVX512
VPSRLVQ	xmmreg	mask	z,xmmreg*,xmrm128 b64	AVX512VL
VPSRLVQ	ymmreg	mask	z,ymmreg*,ymmrm256 b64	AVX512VL
VPSRLVQ	zmmreg	mask	z,zmmreg*,zmrm512 b64	AVX512
VPSRLVW	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPSRLVW	ymmreg	mask	z,ymmreg*,ymmrm256	AVX512VL/BW
VPSRLVW	zmmreg	mask	z,zmmreg*,zmrm512	AVX512BW
VPSRLW	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPSRLW	ymmreg	mask	z,ymmreg*,xmrm128	AVX512VL/BW
VPSRLW	zmmreg	mask	z,zmmreg*,xmrm128	AVX512BW
VPSRLW	xmmreg	mask	z,xmrm128*,imm8	AVX512VL/BW
VPSRLW	ymmreg	mask	z,yymmrm256*,imm8	AVX512VL/BW
VPSRLW	zmmreg	mask	z,zmrm512*,imm8	AVX512BW
VPSUBB	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPSUBB	ymmreg	mask	z,ymmreg*,ymmrm256	AVX512VL/BW
VPSUBB	zmmreg	mask	z,zmmreg*,zmrm512	AVX512BW

VPSUBD	xmmreg	mask	z,xmmreg*,xmrm128	b32 AVX512VL
VPSUBD	ymmreg	mask	z,ymmreg*,ymrm256	b32 AVX512VL
VPSUBD	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512
VPSUBQ	xmmreg	mask	z,xmmreg*,xmrm128	b64 AVX512VL
VPSUBQ	ymmreg	mask	z,ymmreg*,ymrm256	b64 AVX512VL
VPSUBQ	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512
VPSUBSB	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPSUBSB	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VL/BW
VPSUBSB	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPSUBSW	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPSUBSW	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VL/BW
VPSUBSW	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPSUBUSB	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPSUBUSB	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VL/BW
VPSUBUSB	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPSUBUSW	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPSUBUSW	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VL/BW
VPSUBUSW	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPSUBW	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPSUBW	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VL/BW
VPSUBW	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPTERNLOGD	xmmreg	mask	z,xmmreg,xmrm128	b32,imm8 AVX512VL
VPTERNLOGD	ymmreg	mask	z,ymmreg,ymrm256	b32,imm8 AVX512VL
VPTERNLOGD	zmmreg	mask	z,zmmreg,zmmrm512	b32,imm8 AVX512
VPTERNLOGQ	xmmreg	mask	z,xmmreg,xmrm128	b64,imm8 AVX512VL
VPTERNLOGQ	ymmreg	mask	z,ymmreg,ymrm256	b64,imm8 AVX512VL
VPTERNLOGQ	zmmreg	mask	z,zmmreg,zmmrm512	b64,imm8 AVX512
VPTESTMB	kreg	mask,xmmreg,xmrm128	AVX512VL/BW	
VPTESTMB	kreg	mask,ymmreg,ymrm256	AVX512VL/BW	
VPTESTMB	kreg	mask,zmmreg,zmmrm512	AVX512BW	
VPTESTMD	kreg	mask,xmmreg,xmrm128	b32 AVX512VL	
VPTESTMD	kreg	mask,ymmreg,ymrm256	b32 AVX512VL	
VPTESTMD	kreg	mask,zmmreg,zmmrm512	b32 AVX512	
VPTESTMQ	kreg	mask,xmmreg,xmrm128	b64 AVX512VL	
VPTESTMQ	kreg	mask,ymmreg,ymrm256	b64 AVX512VL	
VPTESTMQ	kreg	mask,zmmreg,zmmrm512	b64 AVX512	
VPTESTMW	kreg	mask,xmmreg,xmrm128	AVX512VL/BW	
VPTESTMW	kreg	mask,ymmreg,ymrm256	AVX512VL/BW	
VPTESTMW	kreg	mask,zmmreg,zmmrm512	AVX512BW	
VPTESTNMB	kreg	mask,xmmreg,xmrm128	AVX512VL/BW	
VPTESTNMB	kreg	mask,ymmreg,ymrm256	AVX512VL/BW	
VPTESTNMB	kreg	mask,zmmreg,zmmrm512	AVX512BW	
VPTESTNMD	kreg	mask,xmmreg,xmrm128	b32 AVX512VL	
VPTESTNMD	kreg	mask,ymmreg,ymrm256	b32 AVX512VL	
VPTESTNMD	kreg	mask,zmmreg,zmmrm512	b32 AVX512	
VPTESTNMQ	kreg	mask,xmmreg,xmrm128	b64 AVX512VL	
VPTESTNMQ	kreg	mask,ymmreg,ymrm256	b64 AVX512VL	
VPTESTNMQ	kreg	mask,zmmreg,zmmrm512	b64 AVX512	
VPTESTNMW	kreg	mask,xmmreg,xmrm128	AVX512VL/BW	
VPTESTNMW	kreg	mask,ymmreg,ymrm256	AVX512VL/BW	
VPTESTNMW	kreg	mask,zmmreg,zmmrm512	AVX512BW	
VPUNPCKHBW	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPUNPCKHBW	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VL/BW
VPUNPCKHBW	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPUNPCKHDQ	xmmreg	mask	z,xmmreg*,xmrm128	b32 AVX512VL
VPUNPCKHDQ	ymmreg	mask	z,ymmreg*,ymrm256	b32 AVX512VL
VPUNPCKHDQ	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512
VPUNPCKHQDQ	xmmreg	mask	z,xmmreg*,xmrm128	b64 AVX512VL
VPUNPCKHQDQ	ymmreg	mask	z,ymmreg*,ymrm256	b64 AVX512VL
VPUNPCKHQDQ	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512

VPUNPCKHWD	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPUNPCKHWD	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VL/BW
VPUNPCKHWD	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPUNPCKLBW	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPUNPCKLBW	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VL/BW
VPUNPCKLBW	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPUNPCKLDQ	xmmreg	mask	z,xmmreg*,xmrm128	b32 AVX512VL
VPUNPCKLDQ	ymmreg	mask	z,ymmreg*,ymrm256	b32 AVX512VL
VPUNPCKLDQ	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512
VPUNPCKLQDQ	xmmreg	mask	z,xmmreg*,xmrm128	b64 AVX512VL
VPUNPCKLQDQ	ymmreg	mask	z,ymmreg*,ymrm256	b64 AVX512VL
VPUNPCKLQDQ	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512
VPUNPCKLWD	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VL/BW
VPUNPCKLWD	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VL/BW
VPUNPCKLWD	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512BW
VPXORD	xmmreg	mask	z,xmmreg*,xmrm128	b32 AVX512VL
VPXORD	ymmreg	mask	z,ymmreg*,ymrm256	b32 AVX512VL
VPXORD	zmmreg	mask	z,zmmreg*,zmmrm512	b32 AVX512
VPXORQ	xmmreg	mask	z,xmmreg*,xmrm128	b64 AVX512VL
VPXORQ	ymmreg	mask	z,ymmreg*,ymrm256	b64 AVX512VL
VPXORQ	zmmreg	mask	z,zmmreg*,zmmrm512	b64 AVX512
VRANGEPD	xmmreg	mask	z,xmmreg*,xmrm128	b64,imm8 AVX512VL/DQ
VRANGEPD	ymmreg	mask	z,ymmreg*,ymrm256	b64,imm8 AVX512VL/DQ
VRANGEPD	zmmreg	mask	z,zmmreg*,zmmrm512	b64 sae,imm8 AVX512DQ
VRANGEPS	xmmreg	mask	z,xmmreg*,xmrm128	b32,imm8 AVX512VL/DQ
VRANGEPS	ymmreg	mask	z,ymmreg*,ymrm256	b32,imm8 AVX512VL/DQ
VRANGEPS	zmmreg	mask	z,zmmreg*,zmmrm512	b32 sae,imm8 AVX512DQ
VRANGESD	xmmreg	mask	z,xmmreg*,xmrm64	sae,imm8 AVX512DQ
VRANGESS	xmmreg	mask	z,xmmreg*,xmrm32	sae,imm8 AVX512DQ
VRCP14PD	xmmreg	mask	z,xmmrm128	b64 AVX512VL
VRCP14PD	ymmreg	mask	z,ymrm256	b64 AVX512VL
VRCP14PD	zmmreg	mask	z,zmmrm512	b64 AVX512
VRCP14PS	xmmreg	mask	z,xmmrm128	b32 AVX512VL
VRCP14PS	ymmreg	mask	z,ymrm256	b32 AVX512VL
VRCP14PS	zmmreg	mask	z,zmmrm512	b32 AVX512
VRCP14SD	xmmreg	mask	z,xmmreg*,xmrm64	AVX512
VRCP14SS	xmmreg	mask	z,xmmreg*,xmrm32	AVX512
VRCP28PD	zmmreg	mask	z,zmmrm512	b64 sae AVX512ER
VRCP28PS	zmmreg	mask	z,zmmrm512	b32 sae AVX512ER
VRCP28SD	xmmreg	mask	z,xmmreg*,xmrm64	sae AVX512ER
VRCP28SS	xmmreg	mask	z,xmmreg*,xmrm32	sae AVX512ER
VREDUCEPD	xmmreg	mask	z,xmmrm128	b64,imm8 AVX512VL/DQ
VREDUCEPD	ymmreg	mask	z,ymrm256	b64,imm8 AVX512VL/DQ
VREDUCEPD	zmmreg	mask	z,zmmrm512	b64 sae,imm8 AVX512DQ
VREDUCEPS	xmmreg	mask	z,xmmrm128	b32,imm8 AVX512VL/DQ
VREDUCEPS	ymmreg	mask	z,ymrm256	b32,imm8 AVX512VL/DQ
VREDUCEPS	zmmreg	mask	z,zmmrm512	b32 sae,imm8 AVX512DQ
VREDUCESD	xmmreg	mask	z,xmmreg*,xmrm64	sae,imm8 AVX512DQ
VREDUCESS	xmmreg	mask	z,xmmreg*,xmrm32	sae,imm8 AVX512DQ
VRNDSCALEPD	xmmreg	mask	z,xmmrm128	b64,imm8 AVX512VL
VRNDSCALEPD	ymmreg	mask	z,ymrm256	b64,imm8 AVX512VL
VRNDSCALEPD	zmmreg	mask	z,zmmrm512	b64 sae,imm8 AVX512
VRNDSCALEPS	xmmreg	mask	z,xmmrm128	b32,imm8 AVX512VL
VRNDSCALEPS	ymmreg	mask	z,ymrm256	b32,imm8 AVX512VL
VRNDSCALEPS	zmmreg	mask	z,zmmrm512	b32 sae,imm8 AVX512
VRNDSCALESD	xmmreg	mask	z,xmmreg*,xmrm64	sae,imm8 AVX512
VRNDSCALESS	xmmreg	mask	z,xmmreg*,xmrm32	sae,imm8 AVX512
VSQRRT14PD	xmmreg	mask	z,xmmrm128	b64 AVX512VL
VSQRRT14PD	ymmreg	mask	z,ymrm256	b64 AVX512VL
VSQRRT14PD	zmmreg	mask	z,zmmrm512	b64 AVX512

VRSQRT14PS	xmmreg	mask z,xmmrm128 b32	AVX512VL
VRSQRT14PS	ymmreg	mask z,ymmrm256 b32	AVX512VL
VRSQRT14PS	zmmreg	mask z,zmmrm512 b32	AVX512
VRSQRT14SD	xmmreg	mask z,xmmreg*,xmmrm64	AVX512
VRSQRT14SS	xmmreg	mask z,xmmreg*,xmmrm32	AVX512
VRSQRT28PD	zmmreg	mask z,zmmrm512 b64 sae	AVX512ER
VRSQRT28PS	zmmreg	mask z,zmmrm512 b32 sae	AVX512ER
VRSQRT28SD	xmmreg	mask z,xmmreg*,xmmrm64 sae	AVX512ER
VRSQRT28SS	xmmreg	mask z,xmmreg*,xmmrm32 sae	AVX512ER
VSCALEFPD	xmmreg	mask z,xmmreg*,xmmrm128 b64	AVX512VL
VSCALEFPD	ymmreg	mask z,ymmreg*,ymmrm256 b64	AVX512VL
VSCALEFPD	zmmreg	mask z,zmmreg*,zmmrm512 b64 er	AVX512
VSCALEFPS	xmmreg	mask z,xmmreg*,xmmrm128 b32	AVX512VL
VSCALEFPS	ymmreg	mask z,ymmreg*,ymmrm256 b32	AVX512VL
VSCALEFPS	zmmreg	mask z,zmmreg*,zmmrm512 b32 er	AVX512
VSCALEFSD	xmmreg	mask z,xmmreg*,xmmrm64 er	AVX512
VSCALEFSS	xmmreg	mask z,xmmreg*,xmmrm32 er	AVX512
VSCATTERDPD	xmem64	mask,xmmreg	AVX512VL
VSCATTERDPD	xmem64	mask,ymmreg	AVX512VL
VSCATTERDPD	yem64	mask,zmmreg	AVX512
VSCATTERDPS	xmem32	mask,xmmreg	AVX512VL
VSCATTERDPS	yem32	mask,ymmreg	AVX512VL
VSCATTERDPS	zmem32	mask,zmmreg	AVX512
VSCATTERPF0DPD	yem64	mask	AVX512PF
VSCATTERPF0DPS	zmem32	mask	AVX512PF
VSCATTERPF0QPD	zmem64	mask	AVX512PF
VSCATTERPF0QPS	zmem32	mask	AVX512PF
VSCATTERPF1DPD	yem64	mask	AVX512PF
VSCATTERPF1DPS	zmem32	mask	AVX512PF
VSCATTERPF1QPD	zmem64	mask	AVX512PF
VSCATTERPF1QPS	zmem32	mask	AVX512PF
VSCATTERQPD	xmem64	mask,xmmreg	AVX512VL
VSCATTERQPD	yem64	mask,ymmreg	AVX512VL
VSCATTERQPD	zmem64	mask,zmmreg	AVX512
VSCATTERQPS	xmem32	mask,xmmreg	AVX512VL
VSCATTERQPS	yem32	mask,xmmreg	AVX512VL
VSCATTERQPS	zmem32	mask,ymmreg	AVX512
VSHUFF32X4	ymmreg	mask z,ymmreg*,ymmrm256 b32,imm8	AVX512VL
VSHUFF32X4	zmmreg	mask z,zmmreg*,zmmrm512 b32,imm8	AVX512
VSHUFF64X2	ymmreg	mask z,ymmreg*,ymmrm256 b64,imm8	AVX512VL
VSHUFF64X2	zmmreg	mask z,zmmreg*,zmmrm512 b64,imm8	AVX512
VSHUFI32X4	ymmreg	mask z,ymmreg*,ymmrm256 b32,imm8	AVX512VL
VSHUFI32X4	zmmreg	mask z,zmmreg*,zmmrm512 b32,imm8	AVX512
VSHUFI64X2	ymmreg	mask z,ymmreg*,ymmrm256 b64,imm8	AVX512VL
VSHUFI64X2	zmmreg	mask z,zmmreg*,zmmrm512 b64,imm8	AVX512
VSHUFPD	xmmreg	mask z,xmmreg*,xmmrm128 b64,imm8	AVX512VL
VSHUFPD	ymmreg	mask z,ymmreg*,ymmrm256 b64,imm8	AVX512VL
VSHUFPD	zmmreg	mask z,zmmreg*,zmmrm512 b64,imm8	AVX512
VSHUFPS	xmmreg	mask z,xmmreg*,xmmrm128 b32,imm8	AVX512VL
VSHUFPS	ymmreg	mask z,ymmreg*,ymmrm256 b32,imm8	AVX512VL
VSHUFPS	zmmreg	mask z,zmmreg*,zmmrm512 b32,imm8	AVX512
VSQRTPD	xmmreg	mask z,xmmrm128 b64	AVX512VL
VSQRTPD	ymmreg	mask z,ymmrm256 b64	AVX512VL
VSQRTPD	zmmreg	mask z,zmmrm512 b64 er	AVX512
VSQRTPS	xmmreg	mask z,xmmrm128 b32	AVX512VL
VSQRTPS	ymmreg	mask z,ymmrm256 b32	AVX512VL
VSQRTPS	zmmreg	mask z,zmmrm512 b32 er	AVX512
VSQRTSD	xmmreg	mask z,xmmreg*,xmmrm64 er	AVX512
VSQRTSS	xmmreg	mask z,xmmreg*,xmmrm32 er	AVX512
VSUBPD	xmmreg	mask z,xmmreg*,xmmrm128 b64	AVX512VL

VSUBPD	ymmreg	mask	z,ymmreg*,ymmrm256	b64	AVX512VL
VSUBPD	zmmreg	mask	z,zmmreg*,zmmrm512	b64	er AVX512
VSUBPS	xmmreg	mask	z,xmmreg*,xmmrm128	b32	AVX512VL
VSUBPS	ymmreg	mask	z,ymmreg*,ymmrm256	b32	AVX512VL
VSUBPS	zmmreg	mask	z,zmmreg*,zmmrm512	b32	er AVX512
VSUBSD	xmmreg	mask	z,xmmreg*,xmmrm64	er	AVX512
VSUBSS	xmmreg	mask	z,xmmreg*,xmmrm32	er	AVX512
VUCOMISD	xmmreg,xmmrm64	sae			AVX512
VUCOMISS	xmmreg,xmmrm32	sae			AVX512
VUNPCKHPD	xmmreg	mask	z,xmmreg*,xmmrm128	b64	AVX512VL
VUNPCKHPD	ymmreg	mask	z,ymmreg*,ymmrm256	b64	AVX512VL
VUNPCKHPD	zmmreg	mask	z,zmmreg*,zmmrm512	b64	AVX512
VUNPCKHPS	xmmreg	mask	z,xmmreg*,xmmrm128	b32	AVX512VL
VUNPCKHPS	ymmreg	mask	z,ymmreg*,ymmrm256	b32	AVX512VL
VUNPCKHPS	zmmreg	mask	z,zmmreg*,zmmrm512	b32	AVX512
VUNPCKLPD	xmmreg	mask	z,xmmreg*,xmmrm128	b64	AVX512VL
VUNPCKLPD	ymmreg	mask	z,ymmreg*,ymmrm256	b64	AVX512VL
VUNPCKLPD	zmmreg	mask	z,zmmreg*,zmmrm512	b64	AVX512
VUNPCKLPS	xmmreg	mask	z,xmmreg*,xmmrm128	b32	AVX512VL
VUNPCKLPS	ymmreg	mask	z,ymmreg*,ymmrm256	b32	AVX512VL
VUNPCKLPS	zmmreg	mask	z,zmmreg*,zmmrm512	b32	AVX512
VXORPD	xmmreg	mask	z,xmmreg*,xmmrm128	b64	AVX512VL/DQ
VXORPD	ymmreg	mask	z,ymmreg*,ymmrm256	b64	AVX512VL/DQ
VXORPD	zmmreg	mask	z,zmmreg*,zmmrm512	b64	AVX512DQ
VXORPS	xmmreg	mask	z,xmmreg*,xmmrm128	b32	AVX512VL/DQ
VXORPS	ymmreg	mask	z,ymmreg*,ymmrm256	b32	AVX512VL/DQ
VXORPS	zmmreg	mask	z,zmmreg*,zmmrm512	b32	AVX512DQ

B.1.42 Intel memory protection keys for userspace (PKU aka PKEYs)

RDPKRU		LONG
WRPKRU		LONG

B.1.43 Read Processor ID

RDPID	reg32	NOLONG
RDPID	reg64	LONG
RDPID	reg32	LONG, UNDOC

B.1.44 New memory instructions

CLFLUSHOPT	mem	
CLWB	mem	
PCOMMIT		NEVER, NOP
CLZERO		AMD
CLZERO	reg_ax	AMD, ND, NOLONG
CLZERO	reg_eax	AMD, ND
CLZERO	reg_rax	AMD, ND, LONG

B.1.45 Processor trace write

PTWRITE	rm32	
PTWRITE	rm64	LONG

B.1.46 Instructions from the Intel Instruction Set Extensions,

B.1.47 doc 319433-034 May 2018

CLDEMOTE	mem	
MOVDIRI	mem32,reg32	SD
MOVDIRI	mem64,reg64	LONG
MOVDIR64B	reg16,mem512	NOLONG
MOVDIR64B	reg32,mem512	
MOVDIR64B	reg64,mem512	LONG
PCONFIG		
TPAUSE	reg32	
TPAUSE	reg32,reg_edx,reg_eax	ND
UMONITOR	reg16	NOLONG
UMONITOR	reg32	
UMONITOR	reg64	LONG
UMWAIT	reg32	
UMWAIT	reg32,reg_edx,reg_eax	ND
WBNOINVD		

B.1.48 Galois field operations (GFNI)

GF2P8AFFINEINVQB	xmmreg,xmmrm128,imm8	GFNI,SSE
VG2P8AFFINEINVQB	xmmreg,xmmreg*,xmmrm128,imm8	GFNI,AVX
VG2P8AFFINEINVQB	ymmreg,ymmreg*,ymmrm256,imm8	GFNI,AVX
VG2P8AFFINEINVQB	xmmreg mask z,xmmreg*,xmmrm128 b64,imm8	AVX512VL,GFNI
VG2P8AFFINEINVQB	ymmreg mask z,ymmreg*,ymmrm256 b64,imm8	AVX512VL,GFNI
VG2P8AFFINEINVQB	zmmreg mask z,zmmreg*,zmmrm512 b64,imm8	AVX512,GFNI
GF2P8AFFINEQB	xmmreg,xmmrm128,imm8	GFNI,SSE
VG2P8AFFINEQB	xmmreg,xmmreg*,xmmrm128,imm8	GFNI,AVX
VG2P8AFFINEQB	ymmreg,ymmreg*,ymmrm256,imm8	GFNI,AVX
VG2P8AFFINEQB	xmmreg mask z,xmmreg*,xmmrm128 b64,imm8	AVX512VL,GFNI
VG2P8AFFINEQB	ymmreg mask z,ymmreg*,ymmrm256 b64,imm8	AVX512VL,GFNI
VG2P8AFFINEQB	zmmreg mask z,zmmreg*,zmmrm512 b64,imm8	AVX512,GFNI
GF2P8MULB	xmmreg,xmmrm128	GFNI,SSE
VG2P8MULB	xmmreg,xmmreg*,xmmrm128	GFNI,AVX
VG2P8MULB	ymmreg,ymmreg*,ymmrm256	GFNI,AVX
VG2P8MULB	xmmreg mask z,xmmreg*,xmmrm128	AVX512VL,GFNI
VG2P8MULB	ymmreg mask z,ymmreg*,ymmrm256	AVX512VL,GFNI
VG2P8MULB	zmmreg mask z,zmmreg*,zmmrm512	AVX512,GFNI

B.1.49 AVX512 Vector Bit Manipulation Instructions 2

VPCOMPRESSB	mem128 mask,xmmreg	AVX512VBMI2/VL
VPCOMPRESSB	mem256 mask,ymmreg	AVX512VBMI2/VL
VPCOMPRESSB	mem512 mask,zmmreg	AVX512VBMI2
VPCOMPRESSB	xmmreg mask z,xmmreg	AVX512VBMI2/VL
VPCOMPRESSB	ymmreg mask z,ymmreg	AVX512VBMI2/VL
VPCOMPRESSB	zmmreg mask z,zmmreg	AVX512VBMI2
VPCOMPRESSW	mem128 mask,xmmreg	AVX512VBMI2/VL
VPCOMPRESSW	mem256 mask,ymmreg	AVX512VBMI2/VL
VPCOMPRESSW	mem512 mask,zmmreg	AVX512VBMI2
VPCOMPRESSW	xmmreg mask z,xmmreg	AVX512VBMI2/VL
VPCOMPRESSW	ymmreg mask z,ymmreg	AVX512VBMI2/VL
VPCOMPRESSW	zmmreg mask z,zmmreg	AVX512VBMI2
VPEXPANDB	mem128 mask,xmmreg	AVX512VBMI2/VL
VPEXPANDB	mem256 mask,ymmreg	AVX512VBMI2/VL
VPEXPANDB	mem512 mask,zmmreg	AVX512VBMI2
VPEXPANDB	xmmreg mask z,xmmreg	AVX512VBMI2/VL

VPEXPANDB	ymmreg	mask	z,ymmreg	AVX512VBMI2/VL
VPEXPANDB	zmmreg	mask	z,zmmreg	AVX512VBMI2
VPEXPANDW	mem128	mask,xmmreg		AVX512VBMI2/VL
VPEXPANDW	mem256	mask,ymmreg		AVX512VBMI2/VL
VPEXPANDW	mem512	mask,zmmreg		AVX512VBMI2
VPEXPANDW	xmmreg	mask	z,xmmreg	AVX512VBMI2/VL
VPEXPANDW	ymmreg	mask	z,ymmreg	AVX512VBMI2/VL
VPEXPANDW	zmmreg	mask	z,zmmreg	AVX512VBMI2
VPSHLDW	xmmreg	mask	z,xmmreg*,xmrm128,imm8	AVX512VBMI2/VL
VPSHLDW	ymmreg	mask	z,ymmreg*,ymrm256,imm8	AVX512VBMI2/VL
VPSHLDW	zmmreg	mask	z,zmmreg*,zmmrm512,imm8	AVX512VBMI2
VPSHLDD	xmmreg	mask	z,xmmreg*,xmrm128 b32,imm8	AVX512VBMI2/VL
VPSHLDD	ymmreg	mask	z,ymmreg*,ymrm256 b32,imm8	AVX512VBMI2/VL
VPSHLDD	zmmreg	mask	z,zmmreg*,zmmrm512 b32,imm8	AVX512VBMI2
VPSHLDQ	xmmreg	mask	z,xmmreg*,xmrm128 b64,imm8	AVX512VBMI2/VL
VPSHLDQ	ymmreg	mask	z,ymmreg*,ymrm256 b64,imm8	AVX512VBMI2/VL
VPSHLDQ	zmmreg	mask	z,zmmreg*,zmmrm512 b64,imm8	AVX512VBMI2
VPSHLDVW	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VBMI2/VL
VPSHLDVW	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VBMI2/VL
VPSHLDVW	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512VBMI2
VPSHLDVD	xmmreg	mask	z,xmmreg*,xmrm128 b32	AVX512VBMI2/VL
VPSHLDVD	ymmreg	mask	z,ymmreg*,ymrm256 b32	AVX512VBMI2/VL
VPSHLDVD	zmmreg	mask	z,zmmreg*,zmmrm512 b32	AVX512VBMI2
VPSHLDVQ	xmmreg	mask	z,xmmreg*,xmrm128 b64	AVX512VBMI2/VL
VPSHLDVQ	ymmreg	mask	z,ymmreg*,ymrm256 b64	AVX512VBMI2/VL
VPSHLDVQ	zmmreg	mask	z,zmmreg*,zmmrm512 b64	AVX512VBMI2
VPSHRDW	xmmreg	mask	z,xmmreg*,xmrm128,imm8	AVX512VBMI2/VL
VPSHRDW	ymmreg	mask	z,ymmreg*,ymrm256,imm8	AVX512VBMI2/VL
VPSHRDW	zmmreg	mask	z,zmmreg*,zmmrm512,imm8	AVX512VBMI2
VPSHRDD	xmmreg	mask	z,xmmreg*,xmrm128 b32,imm8	AVX512VBMI2/VL
VPSHRDD	ymmreg	mask	z,ymmreg*,ymrm256 b32,imm8	AVX512VBMI2/VL
VPSHRDD	zmmreg	mask	z,zmmreg*,zmmrm512 b32,imm8	AVX512VBMI2
VPSHRDQ	xmmreg	mask	z,xmmreg*,xmrm128 b64,imm8	AVX512VBMI2/VL
VPSHRDQ	ymmreg	mask	z,ymmreg*,ymrm256 b64,imm8	AVX512VBMI2/VL
VPSHRDQ	zmmreg	mask	z,zmmreg*,zmmrm512 b64,imm8	AVX512VBMI2
VPSHRDVW	xmmreg	mask	z,xmmreg*,xmrm128	AVX512VBMI2/VL
VPSHRDVW	ymmreg	mask	z,ymmreg*,ymrm256	AVX512VBMI2/VL
VPSHRDVW	zmmreg	mask	z,zmmreg*,zmmrm512	AVX512VBMI2
VPSHRDVD	xmmreg	mask	z,xmmreg*,xmrm128 b32	AVX512VBMI2/VL
VPSHRDVD	ymmreg	mask	z,ymmreg*,ymrm256 b32	AVX512VBMI2/VL
VPSHRDVD	zmmreg	mask	z,zmmreg*,zmmrm512 b32	AVX512VBMI2
VPSHRDVQ	xmmreg	mask	z,xmmreg*,xmrm128 b64	AVX512VBMI2/VL
VPSHRDVQ	ymmreg	mask	z,ymmreg*,ymrm256 b64	AVX512VBMI2/VL
VPSHRDVQ	zmmreg	mask	z,zmmreg*,zmmrm512 b64	AVX512VBMI2

B.1.50 AVX512 VNNI

VPDPBUSD	xmmreg	mask	z,xmmreg*,xmrm128 b32	AVX512VNNI/VL
VPDPBUSD	ymmreg	mask	z,ymmreg*,ymrm256 b32	AVX512VNNI/VL
VPDPBUSD	zmmreg	mask	z,zmmreg*,zmmrm512 b32	AVX512VNNI
VPDPBUSDS	xmmreg	mask	z,xmmreg*,xmrm128 b32	AVX512VNNI/VL
VPDPBUSDS	ymmreg	mask	z,ymmreg*,ymrm256 b32	AVX512VNNI/VL
VPDPBUSDS	zmmreg	mask	z,zmmreg*,zmmrm512 b32	AVX512VNNI
VPDPWSSD	xmmreg	mask	z,xmmreg*,xmrm128 b32	AVX512VNNI/VL
VPDPWSSD	ymmreg	mask	z,ymmreg*,ymrm256 b32	AVX512VNNI/VL
VPDPWSSD	zmmreg	mask	z,zmmreg*,zmmrm512 b32	AVX512VNNI
VPDPWSSDS	xmmreg	mask	z,xmmreg*,xmrm128 b32	AVX512VNNI/VL
VPDPWSSDS	ymmreg	mask	z,ymmreg*,ymrm256 b32	AVX512VNNI/VL
VPDPWSSDS	zmmreg	mask	z,zmmreg*,zmmrm512 b32	AVX512VNNI

B.1.51 AVX512 Bit Algorithms

VPOPCNTB	xmmreg mask z,xmmrm128	AVX512BITALG/VL
VPOPCNTB	ymmreg mask z,ymmrm256	AVX512BITALG/VL
VPOPCNTB	zmmreg mask z,zmmrm512	AVX512BITALG
VPOPCNTW	xmmreg mask z,xmmrm128	AVX512BITALG/VL
VPOPCNTW	ymmreg mask z,ymmrm256	AVX512BITALG/VL
VPOPCNTW	zmmreg mask z,zmmrm512	AVX512BITALG
VPOPCNTD	xmmreg mask z,xmmrm128	AVX512VPOPCNTDQ/VL
VPOPCNTD	ymmreg mask z,ymmrm256	AVX512VPOPCNTDQ/VL
VPOPCNTD	zmmreg mask z,zmmrm512	AVX512VPOPCNTDQ
VPOPCNTQ	xmmreg mask z,xmmrm128	AVX512VPOPCNTDQ/VL
VPOPCNTQ	ymmreg mask z,ymmrm256	AVX512VPOPCNTDQ/VL
VPOPCNTQ	zmmreg mask z,zmmrm512	AVX512VPOPCNTDQ
VPSHUFBITQMB	kreg mask,xmmreg,xmmrm128	AVX512BITALG/VL
VPSHUFBITQMB	kreg mask,ymmreg,ymmrm256	AVX512BITALG/VL
VPSHUFBITQMB	kreg mask,zmmreg,zmmrm512	AVX512BITALG

B.1.52 AVX512 4-iteration Multiply-Add

V4FMADDPS	zmmreg mask z,zmmreg rs4,mem	AVX5124FMAPS,S0
V4FNMADDPS	zmmreg mask z,zmmreg rs4,mem	AVX5124FMAPS,S0
V4FMADDSS	zmmreg mask z,zmmreg rs4,mem	AVX5124FMAPS,S0
V4FNMADDSS	zmmreg mask z,zmmreg rs4,mem	AVX5124FMAPS,S0

B.1.53 AVX512 4-iteration Dot Product

V4DPWSSDS	zmmreg mask z,zmmreg rs4,mem	AVX5124VNNIW,S0
V4DPWSSD	zmmreg mask z,zmmreg rs4,mem	AVX5124VNNIW,S0

B.1.54 Intel Software Guard Extensions (SGX)

ENCLS	SGX
ENCLU	SGX
ENCLV	SGX

B.1.55 Intel Control-Flow Enforcement Technology (CET)

CLRSSBSY	mem64	CET
ENDBR32		CET
ENDBR64		CET
INCSSPD	reg32	CET
INCSSPQ	reg64	CET, LONG
RDSSPD	reg32	CET
RDSSPQ	reg64	CET, LONG
RSTORSSP	mem64	CET
SAVEPREVSSP		CET
SETSSBSY		CET
WRUSSD	mem32, reg32	CET
WRUSSQ	mem64, reg64	CET, LONG
WRSSD	mem32, reg32	CET
WRSSQ	mem64, reg64	CET, LONG

B.1.56 Instructions from ISE doc 319433-040, June 2020

ENQCMD	reg16,mem512	ENQCMD
ENQCMD	reg32,mem512	ENQCMD,ND
ENQCMD	reg32,mem512	ENQCMD
ENQCMD	reg64,mem512	ENQCMD, LONG
ENQCMDS	reg16,mem512	ENQCMD, PRIV
ENQCMDS	reg32,mem512	ENQCMD, PRIV, ND
ENQCMDS	reg32,mem512	ENQCMD, PRIV
ENQCMDS	reg64,mem512	ENQCMD, PRIV, LONG
PCONFIG		PCONFIG, PRIV
SERIALIZE		SERIALIZE
WBNOINVD		WBNOINVD, PRIV
XRESLDTRK		TSXLDTRK
XSUSLDTRK		TSXLDTRK

B.1.57 AVX512 Bfloat16 instructions

VCVTNE2PS2BF16	xmmreg mask z,xmmreg*,xmrm128 b32	AVX512BF16
VCVTNE2PS2BF16	ymmreg mask z,ymmreg*,ymrm256 b32	AVX512BF16
VCVTNE2PS2BF16	zmmreg mask z,zmmreg*,zmmrm512 b32	AVX512BF16
VCVTNE2PS2BF16	xmmreg mask z,xmmreg*,xmrm128 b32	AVX512BF16
VCVTNE2PS2BF16	ymmreg mask z,ymmreg*,ymrm256 b32	AVX512BF16
VCVTNE2PS2BF16	zmmreg mask z,zmmreg*,zmmrm512 b32	AVX512BF16
VDPBF16PS	xmmreg mask z,xmmreg*,xmrm128 b32	AVX512BF16
VDPBF16PS	ymmreg mask z,ymmreg*,ymrm128 b32	AVX512BF16
VDPBF16PS	zmmreg mask z,zmmreg*,zmmrm128 b32	AVX512BF16

B.1.58 AVX512 mask intersect instructions

VP2INTERSECTD	kreg rs2,xmmreg,xmrm128 b32	AVX512BF16
VP2INTERSECTD	kreg rs2,ymmreg,ymrm128 b32	AVX512BF16
VP2INTERSECTD	kreg rs2,zmmreg,zmmrm128 b32	AVX512BF16

B.1.59 Intel Advanced Matrix Extensions (AMX)

LDTILECFG	mem512	AMXTILE, SZ, LONG
STTILECFG	mem512	AMXTILE, SZ, LONG
TDPBF16PS	tmreg,tmreg,tmreg	AMXBF16, LONG
TDPBSSD	tmreg,tmreg,tmreg	AMXINT8, LONG
TDPBSUD	tmreg,tmreg,tmreg	AMXINT8, LONG
TDPBUSD	tmreg,tmreg,tmreg	AMXINT8, LONG
TDPBUUD	tmreg,tmreg,tmreg	AMXINT8, LONG
TILELOADD	tmreg,mem	AMXTILE, MIB, SIB, SX, LONG
TILELOADDT1	tmreg,mem	AMXTILE, MIB, SIB, SX, LONG
TILERELASE		AMXTILE, LONG
TILESTORED	mem,tmreg	AMXTILE, MIB, SIB, SX, LONG
TILEZERO	tmreg	AMXTILE, LONG

B.1.60 Systematic names for the hinting nop instructions

HINT_NOP0	rm16	P6,UNDOC
HINT_NOP0	rm32	P6,UNDOC
HINT_NOP0	rm64	X86_64, LONG, UNDOC
HINT_NOP1	rm16	P6,UNDOC
HINT_NOP1	rm32	P6,UNDOC
HINT_NOP1	rm64	X86_64, LONG, UNDOC
HINT_NOP2	rm16	P6,UNDOC

HINT_NOP2	rm32	P6,UNDOC
HINT_NOP2	rm64	X86_64, LONG, UNDOC
HINT_NOP3	rm16	P6,UNDOC
HINT_NOP3	rm32	P6,UNDOC
HINT_NOP3	rm64	X86_64, LONG, UNDOC
HINT_NOP4	rm16	P6,UNDOC
HINT_NOP4	rm32	P6,UNDOC
HINT_NOP4	rm64	X86_64, LONG, UNDOC
HINT_NOP5	rm16	P6,UNDOC
HINT_NOP5	rm32	P6,UNDOC
HINT_NOP5	rm64	X86_64, LONG, UNDOC
HINT_NOP6	rm16	P6,UNDOC
HINT_NOP6	rm32	P6,UNDOC
HINT_NOP6	rm64	X86_64, LONG, UNDOC
HINT_NOP7	rm16	P6,UNDOC
HINT_NOP7	rm32	P6,UNDOC
HINT_NOP7	rm64	X86_64, LONG, UNDOC
HINT_NOP8	rm16	P6,UNDOC
HINT_NOP8	rm32	P6,UNDOC
HINT_NOP8	rm64	X86_64, LONG, UNDOC
HINT_NOP9	rm16	P6,UNDOC
HINT_NOP9	rm32	P6,UNDOC
HINT_NOP9	rm64	X86_64, LONG, UNDOC
HINT_NOP10	rm16	P6,UNDOC
HINT_NOP10	rm32	P6,UNDOC
HINT_NOP10	rm64	X86_64, LONG, UNDOC
HINT_NOP11	rm16	P6,UNDOC
HINT_NOP11	rm32	P6,UNDOC
HINT_NOP11	rm64	X86_64, LONG, UNDOC
HINT_NOP12	rm16	P6,UNDOC
HINT_NOP12	rm32	P6,UNDOC
HINT_NOP12	rm64	X86_64, LONG, UNDOC
HINT_NOP13	rm16	P6,UNDOC
HINT_NOP13	rm32	P6,UNDOC
HINT_NOP13	rm64	X86_64, LONG, UNDOC
HINT_NOP14	rm16	P6,UNDOC
HINT_NOP14	rm32	P6,UNDOC
HINT_NOP14	rm64	X86_64, LONG, UNDOC
HINT_NOP15	rm16	P6,UNDOC
HINT_NOP15	rm32	P6,UNDOC
HINT_NOP15	rm64	X86_64, LONG, UNDOC
HINT_NOP16	rm16	P6,UNDOC
HINT_NOP16	rm32	P6,UNDOC
HINT_NOP16	rm64	X86_64, LONG, UNDOC
HINT_NOP17	rm16	P6,UNDOC
HINT_NOP17	rm32	P6,UNDOC
HINT_NOP17	rm64	X86_64, LONG, UNDOC
HINT_NOP18	rm16	P6,UNDOC
HINT_NOP18	rm32	P6,UNDOC
HINT_NOP18	rm64	X86_64, LONG, UNDOC
HINT_NOP19	rm16	P6,UNDOC
HINT_NOP19	rm32	P6,UNDOC
HINT_NOP19	rm64	X86_64, LONG, UNDOC
HINT_NOP20	rm16	P6,UNDOC
HINT_NOP20	rm32	P6,UNDOC
HINT_NOP20	rm64	X86_64, LONG, UNDOC
HINT_NOP21	rm16	P6,UNDOC
HINT_NOP21	rm32	P6,UNDOC
HINT_NOP21	rm64	X86_64, LONG, UNDOC
HINT_NOP22	rm16	P6,UNDOC

HINT_NOP22	rm32	P6,UNDOC
HINT_NOP22	rm64	X86_64, LONG, UNDOC
HINT_NOP23	rm16	P6,UNDOC
HINT_NOP23	rm32	P6,UNDOC
HINT_NOP23	rm64	X86_64, LONG, UNDOC
HINT_NOP24	rm16	P6,UNDOC
HINT_NOP24	rm32	P6,UNDOC
HINT_NOP24	rm64	X86_64, LONG, UNDOC
HINT_NOP25	rm16	P6,UNDOC
HINT_NOP25	rm32	P6,UNDOC
HINT_NOP25	rm64	X86_64, LONG, UNDOC
HINT_NOP26	rm16	P6,UNDOC
HINT_NOP26	rm32	P6,UNDOC
HINT_NOP26	rm64	X86_64, LONG, UNDOC
HINT_NOP27	rm16	P6,UNDOC
HINT_NOP27	rm32	P6,UNDOC
HINT_NOP27	rm64	X86_64, LONG, UNDOC
HINT_NOP28	rm16	P6,UNDOC
HINT_NOP28	rm32	P6,UNDOC
HINT_NOP28	rm64	X86_64, LONG, UNDOC
HINT_NOP29	rm16	P6,UNDOC
HINT_NOP29	rm32	P6,UNDOC
HINT_NOP29	rm64	X86_64, LONG, UNDOC
HINT_NOP30	rm16	P6,UNDOC
HINT_NOP30	rm32	P6,UNDOC
HINT_NOP30	rm64	X86_64, LONG, UNDOC
HINT_NOP31	rm16	P6,UNDOC
HINT_NOP31	rm32	P6,UNDOC
HINT_NOP31	rm64	X86_64, LONG, UNDOC
HINT_NOP32	rm16	P6,UNDOC
HINT_NOP32	rm32	P6,UNDOC
HINT_NOP32	rm64	X86_64, LONG, UNDOC
HINT_NOP33	rm16	P6,UNDOC
HINT_NOP33	rm32	P6,UNDOC
HINT_NOP33	rm64	X86_64, LONG, UNDOC
HINT_NOP34	rm16	P6,UNDOC
HINT_NOP34	rm32	P6,UNDOC
HINT_NOP34	rm64	X86_64, LONG, UNDOC
HINT_NOP35	rm16	P6,UNDOC
HINT_NOP35	rm32	P6,UNDOC
HINT_NOP35	rm64	X86_64, LONG, UNDOC
HINT_NOP36	rm16	P6,UNDOC
HINT_NOP36	rm32	P6,UNDOC
HINT_NOP36	rm64	X86_64, LONG, UNDOC
HINT_NOP37	rm16	P6,UNDOC
HINT_NOP37	rm32	P6,UNDOC
HINT_NOP37	rm64	X86_64, LONG, UNDOC
HINT_NOP38	rm16	P6,UNDOC
HINT_NOP38	rm32	P6,UNDOC
HINT_NOP38	rm64	X86_64, LONG, UNDOC
HINT_NOP39	rm16	P6,UNDOC
HINT_NOP39	rm32	P6,UNDOC
HINT_NOP39	rm64	X86_64, LONG, UNDOC
HINT_NOP40	rm16	P6,UNDOC
HINT_NOP40	rm32	P6,UNDOC
HINT_NOP40	rm64	X86_64, LONG, UNDOC
HINT_NOP41	rm16	P6,UNDOC
HINT_NOP41	rm32	P6,UNDOC
HINT_NOP41	rm64	X86_64, LONG, UNDOC
HINT_NOP42	rm16	P6,UNDOC

HINT_NOP42	rm32	P6, UNDOC
HINT_NOP42	rm64	X86_64, LONG, UNDOC
HINT_NOP43	rm16	P6, UNDOC
HINT_NOP43	rm32	P6, UNDOC
HINT_NOP43	rm64	X86_64, LONG, UNDOC
HINT_NOP44	rm16	P6, UNDOC
HINT_NOP44	rm32	P6, UNDOC
HINT_NOP44	rm64	X86_64, LONG, UNDOC
HINT_NOP45	rm16	P6, UNDOC
HINT_NOP45	rm32	P6, UNDOC
HINT_NOP45	rm64	X86_64, LONG, UNDOC
HINT_NOP46	rm16	P6, UNDOC
HINT_NOP46	rm32	P6, UNDOC
HINT_NOP46	rm64	X86_64, LONG, UNDOC
HINT_NOP47	rm16	P6, UNDOC
HINT_NOP47	rm32	P6, UNDOC
HINT_NOP47	rm64	X86_64, LONG, UNDOC
HINT_NOP48	rm16	P6, UNDOC
HINT_NOP48	rm32	P6, UNDOC
HINT_NOP48	rm64	X86_64, LONG, UNDOC
HINT_NOP49	rm16	P6, UNDOC
HINT_NOP49	rm32	P6, UNDOC
HINT_NOP49	rm64	X86_64, LONG, UNDOC
HINT_NOP50	rm16	P6, UNDOC
HINT_NOP50	rm32	P6, UNDOC
HINT_NOP50	rm64	X86_64, LONG, UNDOC
HINT_NOP51	rm16	P6, UNDOC
HINT_NOP51	rm32	P6, UNDOC
HINT_NOP51	rm64	X86_64, LONG, UNDOC
HINT_NOP52	rm16	P6, UNDOC
HINT_NOP52	rm32	P6, UNDOC
HINT_NOP52	rm64	X86_64, LONG, UNDOC
HINT_NOP53	rm16	P6, UNDOC
HINT_NOP53	rm32	P6, UNDOC
HINT_NOP53	rm64	X86_64, LONG, UNDOC
HINT_NOP54	rm16	P6, UNDOC
HINT_NOP54	rm32	P6, UNDOC
HINT_NOP54	rm64	X86_64, LONG, UNDOC
HINT_NOP55	rm16	P6, UNDOC
HINT_NOP55	rm32	P6, UNDOC
HINT_NOP55	rm64	X86_64, LONG, UNDOC
HINT_NOP56	rm16	P6, UNDOC
HINT_NOP56	rm32	P6, UNDOC
HINT_NOP56	rm64	X86_64, LONG, UNDOC
HINT_NOP57	rm16	P6, UNDOC
HINT_NOP57	rm32	P6, UNDOC
HINT_NOP57	rm64	X86_64, LONG, UNDOC
HINT_NOP58	rm16	P6, UNDOC
HINT_NOP58	rm32	P6, UNDOC
HINT_NOP58	rm64	X86_64, LONG, UNDOC
HINT_NOP59	rm16	P6, UNDOC
HINT_NOP59	rm32	P6, UNDOC
HINT_NOP59	rm64	X86_64, LONG, UNDOC
HINT_NOP60	rm16	P6, UNDOC
HINT_NOP60	rm32	P6, UNDOC
HINT_NOP60	rm64	X86_64, LONG, UNDOC
HINT_NOP61	rm16	P6, UNDOC
HINT_NOP61	rm32	P6, UNDOC
HINT_NOP61	rm64	X86_64, LONG, UNDOC
HINT_NOP62	rm16	P6, UNDOC

HINT_NOP62	rm32
HINT_NOP62	rm64
HINT_NOP63	rm16
HINT_NOP63	rm32
HINT_NOP63	rm64

P6,UNDOC
X86_64, LONG, UNDOC
P6,UNDOC
P6,UNDOC
X86_64, LONG, UNDOC