

R/M \ Mod	00	01	10	11
000	[AX]	[AX + Disp8]	[AX + Disp16]	Reg AL/AX
001	[BX]	[BX + Disp8]	[BX + Disp16]	Reg BL/BX
010	[CX]	[CX + Disp8]	[CX + Disp16]	Reg CL/CX
011	[DX]	[DX + Disp8]	[DX + Disp16]	Reg DL/DX
100	[EX]	[EX + Disp8]	[EX + Disp16]	Reg AH/EX
101	[FX]	[FX + Disp8]	[FX + Disp16]	Reg BH/FX
110	[SP]	[SP + Disp8]	[SP + Disp16]	Reg CH/SP
111	[BP]	[BP + Disp8]	[BP + Disp16]	Reg DH/BP
	[Reg16]	[Reg16 + Disp8]	[Reg16 + Disp16]	Reg8/Reg16
XXX	[Disp16]	Imm8	Imm16	[Disp8]

Mod	R/M	Reg
2 b	3 b	3 b

Mod	Meaning
00	Register indirect.
01	Register indirect with 8bit displacement.
10	Register indirect with 16bit displacement.
11	Register direct.

Reg defines the src or dst register.

Mod & R/M define the other src or dst register/memory location.

Reg8

Load from zero page (addr in reg8)

Disp8

Load from zero page (addr in imm8)

Disp16

Load from anywhere (addr in imm16)

Imm8

Load immediate from imm8

Imm16

Load immediate from imm16

Address	8 Bit Op.	16 Bit Op.	Register	Use
000	AL	AX	<div>AH</div> <div>AL</div>	GP, Arguments, Returns
001	BL	BX	<div>BH</div> <div>BL</div>	GP, Arguments
010	CL	CX	<div>CH</div> <div>CL</div>	GP, Counters
011	DL	DX	<div>DH</div> <div>DL</div>	GP
100	AH	EX*	<div>EX</div>	GP
101	BH	FX*	<div>FX</div>	GP, Relative data offset for PIC?
110	CH	SP**	<div>SP</div>	Stack
111	DH	BP**	<div>BP</div>	Stack

\*16 bit only register.

\*\*Stack pointers.

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7		
Opcode + Mod		D/W R/M	Displacement	Immediate				
Instruction / Opcode (Bits)								
Any Opcode						Mod		
Byte 1				Byte 2				
Opcode			Mod	Size + Direction		R/M	Reg	
Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7	Byte 8	
Instruction / Opcode		Mod R/M	<del>SIB</del>	Displacement	Immediate			
Instruction / Opcode (Bits)								
Any Opcode						Size	Direction	
Byte 1			Byte 2			Byte 3		
Opcode	Size	Direction	Mod	Reg	R/M	Scale	Index	Base