

The diagram illustrates the internal architecture of the Intel 8086 microprocessor. It shows various functional units and their interconnections:

- ALU (Arithmetic Logic Unit):** Located at the top center, it performs arithmetic and logical operations.
- Registers:** Multiple 16-bit registers are shown, including the Program Counter (PC), Instruction Register (IR), Stack Pointer (SP), Base Pointer (BP), Index Registers (SI, DI), General Purpose Registers (AX, BX, CX, DX), and Segment Registers (CS, DS, SS, ES).
- Control Logic:** Includes the Instruction Decoder, Status Word, and other control signals.
- Data Path:** The central horizontal bus connects all major components.
- External Connections:** Pins for Address Bus (A₁₆₋₂₀, A₀₋₁₅), Data Bus (D₁₅₋₀), and Control Signals (VCC, GND, RESET, NMI, INTA, etc.) are shown around the perimeter.

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