

Comparison of Microprocessors from Intel 8085 to Pentium-IV

Name	8085	8086	8088	80186	80286	80386DX	80386SX	80486	Pentium 1	Pentium Pro	Pentium 2	Pentium 3	Pentium 4
Launch Year	1976	1978	1979	1982	1982	1985	1988	1989	1993	1995	1997	1999	2000
Pins	40 pin DIP	40 pin DIP	40 pin DIP	68 pin PLCC, LCC, PGA	68 pin PLCC LCC PGA	132 pin PGA, PQFP	100 pin BQFP	196 pin PQFP	273 pin PGA	387 pin PGA	246 pin SEC	242-pin SEC2	478 FC-mPGA4
Internal Architecture	8 bit	16 bit	16 bit	16 bit	16 bit	32 bit	32 bit	32 bit	32 bit	32 bit	32 bit	32 bit	32 bit
Data Bus Width	8 bit	16 bit	8 bit	16 bit	16 bit	32 bit	¹⁶ 24 bit	32 bit	64 bit	64 bit	64 bit	64 bit	64 bit
Address Bus	16 bit	20 bit	20 bit	20 bit	24 bit	32 bit	24 bit	32 bit	32 bit	36 bit	36 bit	36 bit	36 bit
Transistors	6500	29000	29000	55000	134000	275000	275000	1.2-1.6M	3.1M	5.5M	9.5-28.1 7.5M	9.5-28.1M	42-188M
Max. Clock Rate	3-6 MHz	5-10 MHz	5-16 MHz	6-25 MHz	5-25 MHz	16-33 MHz	16-33 MHz	16-100 MHz	60-200 MHz	150-200 MHz	233-450 MHz	0.4-1.4 GHz	1.3-3.8 GHz
Process Size	3 μm	3 μm	3 μm	3 μm	1.5 μm	1 μm	1 μm	1-0.6 μm	0.8 μm	0.6-0.3 μm	330-250 nm	250-130 nm	180-65 nm
Instructions per Second (MIPS)	0.37	0.33-0.75	0.33-0.66	1+	0.9-2.67	5-9.9	2.5-5.1	11.1 at 33 MHz	188 at 100 MHz	541 at 200 MHz	844 at 300 MHz	2054 at 600 MHz	9726 at 3.2 GHz
Max. Addressable Memory	64 kb	1 Mb	1 Mb	1 Mb	16 Mb	4 GB	16 Mb	4 GB	4 GB	64 GB	64 GB	64 GB	64 GB
Virtual Memory Max.	-	-	-	-	1 GB	64 TB	64 TB	64 TB	64 TB	Very High	Very High	Very High	Very High
Co-processors	-	8087 8089	8087	8087 80187	80287	80387	80387 SX	80487 SX	-	-	-	-	-