A History of Microprocessor Transistor Count

1971 to 2013

Source: Wikipedia, August 29, 2013

Processor	Transistor count	Date of introduction	Manufacturer	Process	Area
Intel 4004	2,300	1971	Intel	10 μm	12 mm²
Intel 8008	3,500	1972	Intel	10 μm	14 mm²
MOS Technology 6502	3,510[citation needed]	1975	MOS Technology	8 μm	21 mm²
Motorola 6800	4,100	1974	Motorola	6 μm	16 mm²
Intel 8080	4,500	1974	Intel	6 μm	20 mm²
RCA 1802	5,000	1974	RCA	5 μm	27 mm²
Intel 8085	6,500	1976	Intel	3 μm	20 mm²
Zilog Z80	8,500	1976	Zilog	4 μm	18 mm²
Motorola 6809	9,000	1978	Motorola	5 μm	21 mm²
ARM 1	25,000[1]	1985	Acorn		
ARM 2	25,000	1986	Acorn		
Intel 8086	29,000	1978	Intel	3 μm	33 mm²
Intel 8088	29,000	1979	Intel	3 μm	33 mm²
ARM 6	30,000	1991	ARM		
Intel 80186	55,000	1982	Intel	3 μm	
Motorola 68000	68,000	1979	Motorola	4 μm	44 mm²
Intel 80286	134,000	1982	Intel	1.5 μm	49 mm²
Intel 80386	275,000	1985	Intel	1.5 μm	104 mm²
ARM 3	300,000[2]	1989	Acorn		
ARM 7	578977[3]	1994	ARM		68.51 mm²
Intel 80486	1,180,235	1989	Intel	1 μm	173 mm²
R4000	1,350,000	1991	MIPS	1.0 μm	213 mm²
Pentium	3,100,000	1993	Intel	0.8 μm	294 mm²
AMD K5	4,300,000	1996	AMD	0.5 μm	251 mm²
Pentium Pro	5,500,000[4]	1995	Intel	0.5 μm	307 mm²
Pentium II	7,500,000	1997	Intel	0.35 μm	195 mm²
AMD K6	8,800,000	1997	AMD	0.35 μm	162 mm²
Pentium III	9,500,000	1999	Intel	0.25 μm	128 mm²

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AMD K6-III	21,300,000	1999	AMD	0.25 μm	118 mm²
AMD K7	22,000,000	1999	AMD	0.25 μm	184 mm²
ARM Cortex-A9	26,000,000[6]	2007	ARM		
Pentium 4	42,000,000	2000	Intel	180 nm	217 mm²
Atom	47,000,000	2008	Intel	45 nm	24 mm²
Barton	54,300,000	2003	AMD	130 nm	101 mm²
AMD K8	105,900,000	2003	AMD	130 nm	193 mm²
Itanium 2 McKinley	220,000,000	2002	Intel	180 nm	421 mm²
Cell	241,000,000	2006	Sony/IBM/Toshiba	90 nm	221 mm²
Core 2 Duo	291,000,000	2006	Intel	65 nm	143 mm²
Itanium 2 Madison 6M	410,000,000	2003	Intel	130 nm	374 mm²
AMD K10 quad-core 2M L3	463,000,000[5]	2007	AMD	65 nm	283 mm²
Itanium 2 with 9MB cache	592,000,000	2004	Intel	130 nm	432 mm²
Core i7 (Quad)	731,000,000	2008	Intel	45 nm	263 mm²
AMD K10 quad-core 6M L3	758,000,000[5]	2008	AMD	45 nm	258 mm²
POWER6	789,000,000	2007	IBM	65 nm	341 mm²
Six-Core Opteron 2400	904,000,000	2009	AMD	45 nm	346 mm²
16-Core SPARC T3	1,000,000,000[7]	2010	Sun/Oracle	40 nm	377 mm²
Quad-Core + GPU Core i7	1,160,000,000	2011	Intel	32 nm	216 mm²
Six-Core Core i7 (Gulftown)	1,170,000,000	2010	Intel	32 nm	240 mm²
8-Core AMD Bulldozer	1,200,000,000[8]	2012	AMD	32nm	315 mm²
8-core POWER7 32M L3	1,200,000,000	2010	IBM	45 nm	567 mm²
Quad-Core + GPU AMD Trinity	1,303,000,000	2012	AMD	32 nm	246 mm²
Quad-Core + GPU Core i7	1,400,000,000	2012	Intel	22 nm	160 mm²
Quad-core z196[9]	1,400,000,000	2010	IBM	45 nm	512 mm²
Dual-Core Itanium 2	1,700,000,000[10]	2006	Intel	90 nm	596 mm²
Six-Core Xeon 7400	1,900,000,000	2008	Intel	45 nm	503 mm²

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Quad-Core Itanium Tukwila	2,000,000,000[11]	2010	Intel	65 nm	699 mm²
8-core POWER7+ 80M L3	2,100,000,000	2012	IBM	32 nm	567 mm²
Six-Core Core i7/8-Core Xeon E5 (Sandy Bridge-E/EP)	2,270,000,000[12]	2011	Intel	32 nm	434 mm²
8-Core Xeon Nehalem-EX	2,300,000,000[13]	2010	Intel	45 nm	684 mm²
10-Core Xeon Westmere-EX	2,600,000,000	2011	Intel	32 nm	512 mm²
Six-core zEC12	2,750,000,000	2012	IBM	32 nm	597 mm²
8-Core Itanium Poulson	3,100,000,000	2012	Intel	32 nm	544 mm²
62-Core Xeon Phi	5,000,000,000	2012	Intel	22 nm	
Xbox One Main SoC	5,000,000,000	2013	Microsoft		363 mm²