

Inside Intel: chips with everything

1968
Intel founded by Robert Noyce (the inventor of the integrated circuit), Gordon Moore and Andy Grove, all from Fairchild Semiconductor.

1970
Intel launches the 1103, the first widely-available Ram (random access memory) chip. It stores 1K (1024 bits) of information.

1971
Intel offers the 4-bit 0.1MHz 4004 microprocessor, the first "computer on a chip", for \$300. The Poketronic, probably the first battery-powered pocket calculator, is launched in the US.



1973
Sinclair Cambridge pocket calculator launched in the UK at £29.95 plus VAT.

1974
Intel announces the 8-bit 8080 microprocessor at \$360. It has 5,000 transistors. Federico Faggin, who has designed all Intel's microprocessors so far, leaves to found Zilog, where he designs the Z80. This has sold more than a billion units, and is still selling about 40 million a year.



1975
The first 8-bit personal computer, the MITS Altair, is a construction kit based on Intel's 8080 microprocessor. Bill Gates and Paul Allen write a version of Basic for it, and found Microsoft. Three important 8-bit processors are unveiled, the Zilog Z80 (used later in the Tandy TRS-80, Sinclair and Amstrad PCs), MOS Technology's 6502 (used later in the Apple II, Commodore PET, Acorn BBC B, Commodore 64) and Motorola 6800 series. The 6502 costs only \$25.

1978
Intel announces the 16-bit 8086, founding the x86 dynasty. It has 29,000 transistors and runs at up to 10MHz. Texas Instruments launches Speak and Spell, the first electronic toy with digital speech synthesis. The UK government launches the £55 million Microprocessor Industry Support Scheme to encourage the development of microprocessors in the UK.

1979
Intel introduces 8088 microprocessor, a cheaper version of the 8086. Acorn offers the System 1 micro-computer kit at £65 plus VAT.

1980
Motorola releases the 8MHz 68000, the first microprocessor with 32-bit registers. Sinclair launches the ZX-80, a kit computer for less than £100. The GPO (in the days before BT) installs the UK's first System X microprocessor-controlled digital telephone exchange. Atari's Pac-Man sweeps the pubs and games arcades.

1981
IBM launches the IBM PC, based on a 4.77MHz Intel 8088. W H Smith starts selling the Sinclair ZX-81, and monthly production hits 50,000.

1982
Intel unveils the 16-bit 80286 processor, which has 130,000 transistors and runs at speeds of up to 12MHz. Sinclair Research launches a new home computer, the Spectrum. Inmos, a UK company, is developing a promising micro-processor, the Transputer.

1984
IBM launches the IBM PC AT, based on a 6MHz Intel 80286. Apple launches the Macintosh based on the rival Motorola 68000 chip; Sinclair announces the QL (Quantum Leap), based on the 68008.

1985
Intel announces the 32-bit 20MHz 80386 processor at \$299, and sues Japan's NEC over the x86-compatible NEC V20 and V30 processors. The 386 has 275,000 transistors, and is the first processor Intel will not allow other firms (except IBM) to manufacture under licence. Atari ST and Commodore Amiga launched: both use the Motorola 68000, as will the later Sega MegaDrive games console.

1986
Compaq brings out the Deskpro 386, the first popular 386-based IBM-compatible, without waiting for IBM. Amstrad dominates the UK market with the first cheap PC clone, the PC-1512, at £399 plus VAT. Intel makes its sixth straight quarterly loss; annual sales are now worth \$1.3 billion.

1987
Acorn launches the Archimedes, the first mass-market computer based on a Risc (Reduced Instruction Set Computer) chip.

1989
Intel announces the 25MHz 80486 processor, which combines a 386, a maths co-processor, cache memory and memory management on one huge die. It has 1.2 million transistors. Annual turnover hits \$3 billion.

1990
Intel co-founder Robert Noyce dies aged 62.

1991
Cyrix launches 486-compatible chips to compete with Intel. IBM, Apple and Motorola form a consortium to back PowerPC processor.

1993
Intel introduces 60 and 66MHz Pentiums with 3.1 million transistors. The Pentium is not called the 586 because a number cannot be trademarked.



1994
Intel and Hewlett-Packard agree to co-develop the next generation of processors, codenamed Merced, the equivalent of the 786. Intel suffers bad publicity following the discovery of a bug in the Pentium's maths routines.

1995
Intel launches the Pentium Pro, which runs at 150 to 200MHz and has 5.5 million transistors. Intel's annual turnover reaches \$16 billion.



2000
Microprocessors are expected to have 50 million transistors and run at 500MHz.