



Computer collection

The computer collection contains personal computers and computer peripherals. Besides entire PCs there is also a collection of PC parts. The fast development can be observed on the basis of a series of mainboards, videocards and memory modules.

At first we show some pictures of our **mechanical calculators**:

Bell-Punch Plus 1948-1958	Bell-Punch Sumlock 1950-1960	Corema MC15 ?
		
Comptometer Half keyboard John Wolff's Web Museum	Comptometer Whole keyboard Vintage Calculator Web Museum	

Electronic calculators


Industria Macchine Elettroniche IME 26 1967	Roneo Alcatel 420B > 1980	
		
<p>Capabilities - 4 functions, memory. Display - 12 digits, "Nixie"-type numerical display tubes. buisjes. Technology - The 24 logic boards have a total of 424 Germanium transistors and 1074 Germanium diodes. It has a magnetic core memory.</p>		
Vintage Calculator Web Museum		

Paper tape equipment:

Elliott Tape Reader T2-132 ca.1970	Facit Tape Puncher PE1501 ?	Teleprint 390 ca. 1967-1980
		
		PDP8.de

Terminals:

Texas Instruments DS990/1 Intelligent Terminal 1980		
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<p>Class 16-bit Terminal Introduction 1980 Processor TMS-9900 (16-bit) Frequency ? RAM / ROM 64KB / 12KB Keyboard 88 keys with numeric en arrow keypads, 10 function keys and 8 state leds Operating system DX10, DNOS Mass memory none Graphic / Text Textmodus 80 x 24 Sound Beeper Price ?</p>		
<p>OLD-COMPUTERS.COM BBK-Retro-Computing</p>		

The real personal computers:

<p>Apple II plus 1979</p>	<p>Commodore CBM 3032 1979</p>	<p>IBM DisplayWriter 6580 1980</p>
		
<p>Class 8-bit Computer Introduction 1979 Processor MOS 6502 Frequency 1.023 MHz RAM / ROM 48KB / 12KB Keyboard Typewriter, 61 keys, QWERTY Operating system AppleDOS Mass memory 2x 5,25" FDD with 143KB Grafic / Text max. 280 x 192 grafic with max. 6 colors, Textmodus 40 x 24 (80 x 24 with extra board) Sound Price \$1195 without floppy drives</p>	<p>Class 8 Bit Computer Introduction 1979 Processor MOS 6502 Frequency 1 MHz RAM / ROM 32KB / 14KB Keyboard Typewriter with 74 keys, QWERTY, Separate numeric keypad Operating system own: CBM Basic V4 Mass memory extern: all FDD's met IEEE488 Bus, datacassette Grafic / Text 40x25 Textmodus Sound Price DM 3000</p>	<p>Class 16-bit Computer Introduction 1980 Processor Intel 8086 Frequency RAM / ROM 256KB / ???KB Keyboard Typewriter with ??? keys, mechanic, QWERTY Operating system ??? Mass memory 2 x 8" FDD a' 256KB, extern Grafic / Text Textmodus 80 x 25 Sound Price \$ 7895 (1 FDD)</p>
<p>Apple II History</p>	<p>Computermuseum München</p>	<p>Computermuseum München</p>

<p>Osborne 1 1981</p>	<p>Acorn BBC 1981</p>	<p>Commodore 64 1982-1993</p>
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<p>Class 8-bit Portable Computer Introduction 1981 Processor Zilog Z80A Frequency 4 MHz RAM / ROM 64KB / 4KB Keyboard Typewriter 69 keys, QWERTY Operating system CP/M 2.2 Mass memory 2 x FDD met 180KB Grafic / Text Textmodus 52 x 24 Op 5" monitor Sound Price \$1795</p>	<p>Class 8-bit Computer Introduction 1981 Processor MOS 6502 Frequency 1.8 MHz RAM / ROM 16KB / 32KB Keyboard Typewriter 64 keys, QWERTY + 10 functionkeys and arrow keys Operating system CP/M 2.2 Mass memory 2 x FDD with 180KB Grafic / Text Grafic: 640 x 256 (2 colors) / 320 x 256 (4 colors) / 160 x 256 (16 colors) Text: 80 x 32/25 (2 colors) / 40 x 32/25 (2 or 4 colors) / 20 x 32 (16 colors) / 40 x 25 (Teletext display) Sound 3 channels + 1 noise channel, 7 octaves Price £ 399 (1983)</p>	<p>Class 8-bit Computer Introduction 1982 Processor 6510 + coprocessors: VIC II (Video), SID (Sound) Frequency 0.985 MHz (PAL) / 1.023 MHz (NTSC) RAM / ROM 64KB / 20KB Keyboard 66 keys with 4 function keys Operating system Basic Mass memory none Grafic / Text Grafic: 320 x 200 Textmodus 40 x 25 Sound 3 voices / 9 octaves, 4 waveforms (sound output through TV) Price \$ 595</p>
<p>Computermuseum München OldComputers.Net</p>	<p>OLD-COMPUTERS.COM</p>	<p>OLD-COMPUTERS.COM 8-Bit-Nirvana</p>

<p>Apple][e 1983 - 1993</p>	<p>Olivetti M24 1983</p>	<p>Olivetti M21 1984 - 1986</p>
		
<p>Class 8-bit Computer Introduction 1983 Processor MOS 6502 Frequency 1.023 MHz RAM / ROM 4KB / 12KB Keyboard 62 keys QWERTY Operating system AppleDOS 3.3 Mass memory 2x 5,25" FDD with 143KB extern Grafic / Text Grafic: 280 x 192 with 8 colors Textmodus 40 x 24 Sound Price \$ 1270</p>	<p>Class 16-bit computer Introduction 1983 Processor Intel 8086, NEC 6845 video generator Frequency 8 MHz RAM / ROM 128KB / 16KB Keyboard 102 keys with numeric and arrow keypads, 18 function keys Operating system MS-DOS 2.11 Mass memory One or two 5.25" disk-drives (360k or 720k), optional 10 Mb hard-disks Grafic / Text 320 x 200 with 4 colors / 640 x 200 monochrom / 640 x 400 monochrom Textmodus 80 x 25 Sound Tone Generator Price 2 disk-drives system : 3535 <input type="checkbox"/> (France, 84) color monitor, 10 Mb hard-disk</p>	<p>Class 16-bit Portabel Computer Introduction 1984 Processor Intel 8086 Frequency 8 MHz RAM / ROM 128KB / 16KB Keyboard 73 keys + 10 funktion keys QWERTY Operating system MS-DOS 2.11 Mass memory two 5.25" disk-drives (360k or 720k), optional 10 Mb hard-disks Grafic / Text Grafic: max. 640 x 400 (CGA), Textmodus 80 x 25 Sound Price DM 8500</p>

	: 8250 ☐ (France, 85)	
Apple II History	OLD-COMPUTERS.COM	Computermuseum München 1000 BIT

Atari 1040ST 1986 - 1989	IBM PS/2 N33 SX 1991	Celex
		
<p>Class 16-bit computer</p> <p>Introduction 1986</p> <p>Processor Motorola MC68000, Sound YM-2149, Grafic: Shifter</p> <p>Frequency 8 MHz</p> <p>RAM / ROM 1MB / 192KB</p> <p>Keyboard 95 keys with numeric and arrow keypads, 10 function keys</p> <p>Operating system TOS 1.00, 1.02, 1.04</p> <p>Mass memory Diskette 3.5" 720K</p> <p>Grafic / Text 320x200 (16 colors) 640x200 (4 colors) 640x400 (Monochrom)</p> <p>Sound</p> <p>Price DM 3298</p> <p>Atari-Computermuseum.de</p>	<p>Class 16-bit notebook computer 9,5" LCD Display</p> <p>Introduction 1991</p> <p>Processor Intel 80386 SX</p> <p>Frequency 12 MHz</p> <p>RAM / ROM 2MB / 64KB</p> <p>Keyboard 85 keys with arrow keypad, 12 function keys</p> <p>Operating system IBM PC DOS 5.0</p> <p>Mass memory 3,5" FDD with 1,44MB, 40MB HD</p> <p>Grafic / Text</p> <p>Sound</p> <p>Price</p> <p>Computermuseum München</p>	<p>Class 16-bit Terminal</p> <p>Introduction 1992</p> <p>Processor Intel 80386 SX</p> <p>Frequency ?</p> <p>RAM / ROM ?</p> <p>Keyboard ?</p> <p>Operating system MSDOS</p> <p>Mass memory ?</p> <p>Grafic / Text ?</p> <p>Sound</p> <p>Price ?</p>

Olivetti M211V 1992	SGI Origin 200 1996	
		
<p>Class 16-bit Labtop</p> <p>Introduction 1992</p> <p>Processor Intel 80386 SX</p> <p>Frequency ?</p> <p>RAM / ROM ?</p> <p>Keyboard ?</p> <p>Operating system MSDOS</p> <p>Mass memory 20 MB harddisk</p> <p>Grafic / Text</p> <p>Sound</p> <p>Price ?</p>	<p>Class 64-bit Server</p> <p>Introduction 1996</p> <p>Processor 2x 64-bit MIPS RISC R12000</p> <p>Frequency 180 MHz</p> <p>RAM / ROM 256 MB - 2 GB</p> <p>Keyboard ?</p>	

	Operating system Mass memory Grafic / Text Sound Price ?	
Kronos Story	SGIstuff Silicon Graphics Inc.	