

Amstrad PPC640

Amstrad PPC640	
Manufacturer	Amstrad
Type	Portable computer
Origin	United Kingdom
Release date	1988; 37 years ago
Introductory price	US\$1,099, 7697 FF (equivalent to \$2,621 in 2021)
Operating system	MS-DOS 3.3, GEM, Q-DOS II (menu driven interface)
CPU	NEC V30 @ 8 MHz
RAM Memory	640KB (PPC640)
ROM	16 KB
Storage	3.5" floppy disk drives
Display	9" Monochrome non-backlit LCD; 640x200 resolution
Graphics	Monochrome Display Adapter, CGA
Colors	Monochrome green - 4 or 16 colours with external monitor
Sound	PC Speaker beeper
Input	complete 102 key QWERTY mechanical keyboard With numeric keypad, editing block and function keys
Text Modes	40 or 80 chars x 25 lines
Built in media	Two 3.5" floppy-drives (720 KB)
Connectivity	RS-232, Centronics, 2400 baud modem (PPC640)
I/O Ports	Centronics, RS232, CGA Monitor, Expansion ports A (25 pin port just bigger than a parallel port) and B (37 pin RS494)
PERIPHERALS	Mouse Systems driver
Power Suply	10 x C size cell batteries or Adapter 12V
Dimensions	45 x 23 x 10 cm,
Mass	(6 kg)
Backward compatibility	IBM PC compatible
Predecessor	PC-1512

The **Amstrad PPC512**^{[1][2]} (Released in 1987) and **Amstrad PPC640**^{[3][2]} (Released in 1988) were the first portable [IBM PC compatible](#) computers made by [Amstrad](#). As [portable computers](#), they contained all the elements necessary to

perform computing on the move. They had a keyboard and a monochrome [LCD display](#) built in and also had space for disposable batteries to power the PC where a suitable alternative power source (i.e. mains or 12 volt vehicle power) was not available. The PCs came with either one or two double density double side [floppy disc](#) drives and the PPC640 model also featured a [modem](#). Both models were supplied with *PPC Organiser* software and the PPC640 was additionally supplied with the *Mirror II* communications software. The two computers had very similar specifications. The **PPC512** had an [NEC V30](#)^{[1][3]} processor running at 8 MHz, 512 [KiB](#) of memory, a full-size 102-key keyboard with a numeric keypad, a built-in [liquid crystal display](#) (not backlit)^[6] that could emulate the [CGA](#) or [MDA](#)^[2] and either one or two 720k 3.5" floppy drives (the model was either the **PPC512S** or **PPC512D** depending on the number of drives it had).^[7] The **PPC640** was otherwise identical except that it had 640 [KiB](#) of memory, a built-in 2400 baud [modem](#) (unusually fast for its day), and its case was a darker shade of grey. Both versions of the machine had an empty socket on the main circuit board so that an Intel [8087](#) coprocessor could be installed to permit hardware processing of floating point arithmetic.

The PPC included standard connectors for [RS-232](#), [Centronics](#) and CGA/MDA video, allowing existing peripherals to be used.^[2] All the signals used by the 8-bit [ISA bus](#) were also available through a pair of expansion connectors. There was available an external card cage for expansion cards.

Four possible power sources could be used:^[8]

- Ten C-size [alkaline batteries](#). (10 x 1.5v = 15 volts, but the load was such the voltage dropped to nearer 12 volts in use.)
- [Mains adaptor](#)
- [Car cigarette lighter](#).
- An Amstrad PC-MD, PC-CD or PC-ECD Monitor. (These monitors all contained a power supply)

The physical layout of the components was unlike most laptop designs: instead of the lid containing the screen, it contained the keyboard. The hinges were therefore at the front of the main unit, rather than the back. The LCD was hinged separately and folded down into a recess on the top of the system unit. The one or two floppy drives were located on the right-hand side. When closed, the size of the PPC was 45 cm wide × 10 cm high × 23 cm deep.

A bank of six [DIP switches](#) was used to select whether the video hardware emulated CGA or MDA, and whether to use an internal or external monitor.

No official [hard drive](#) option or docking station was manufactured, but both were sold by third-party manufacturers.

Software

[MS-DOS 3.3](#) was supplied with all PPCs, along with *PPC Organiser* - a [memory-resident](#) suite of utilities including a card file, diary, calculator and telephone dialler. In addition, the **PPC640** was supplied with *Mirror II*, a communications package for use with the built-in modem.

The MS-DOS [boot disk](#) also included a utility which could be used to switch between the internal display and an external monitor without rebooting.

References:

Old Computer Museum - A detailed description of the PPC640 model, including technical specifications and history:

https://oldcomputermuseum.com/amstrad_ppc640.html

Wikipedia – Amstrad PPC General overview of the PPC512 and PPC640 series, with information on design, hardware and software:

https://en.wikipedia.org/wiki/Amstrad_PPC

Powerhouse Museum Collection - Description of Exhibit PPC640 with design and usage details:

<https://collection.powerhouse.com.au/object/509861>

Centre for Computing History - PPC640D model information, including technical specifications and history:

<https://www.computinghistory.org.uk/det/1113/Amstrad-PPC-640D/>