

ACORN

HIGH PERFORMANCE COMPUTER SYSTEMS



Archimedes 400/I Series



Acorn 
The choice of experience.



The Acorn Archimedes computer systems set new standards of productive performance combined with ease of use. Now the new Archimedes 400/1 range of powerful desktop workstations provides a flexible choice for the serious computer user. Sharing the award-winning Acorn RISC Machine central processor, the models of the Archimedes 400/1 series offer you a range of specifications with the advantage of easily fitted upgrade options. As a result, you can now select the Acorn Archimedes model best suited to your immediate needs and budget, with the security of knowing that all your future requirements can be met by progressively upgrading your Archimedes system.

ARCHIMEDES 400/1 SERIES

At the heart of all Archimedes computers is the world-beating Acorn RISC (Reduced Instruction Set Computer) processor providing unprecedented performance in a desktop microcomputer. The new Archimedes 400/1 series workstations benefit from Acorn's latest technological developments, including a 10% increase in the already amazing processing speed, and feature the new Acorn RISC Operating System (RISC OS).

Acorn RISC OS takes advantage of the processing power of the Archimedes system to give you the most straightforward way of controlling computing tasks. Directing your Archimedes system with the windows, icon, mouse and pointer interface makes the system easy to learn, and yet this ease of use is accompanied by exceptional productivity. The routine operations involved in managing your computer environment are accomplished quicker than you would have believed possible. Newcomers and professional computer specialists alike benefit from the ease and speed of the RISC OS user interface.

Not only is the Archimedes RISC OS system fast in use and easy to learn, it can do several things at once as a matter of course. For example, you can be working within a software application, call up a text editor in a window and write some notes or a memo without leaving the application. With software that takes advantage of RISC OS, you can then import the text you have written (or graphics or data created in other programs) into the main application you are running.



ARCHIMEDES 410/1 SYSTEM

The Archimedes 410/1 system, entry model of the new Archimedes 400/1 range, is a powerful, versatile computer with the capacity to run an enormous range of applications. Standard features include the Archimedes three-button mouse, 103-key 'enhanced PC' style keyboard, and both serial and parallel interface ports for connection to printers, modems and peripherals. The Archimedes applications software suite includes programs that quickly introduce you to the RISC OS way of working and help you make the most of your system.

A full 1 Mbyte of RAM is standard, and the RISC OS operating system is held in the 0.5 Mbyte of ROM making more RAM available for applications and data. 3 Mbytes of additional RAM for really large applications, can easily be added at a later date, and all the RAM in the Archimedes 410/1 computer is fully addressable by the operating system so no special software or reconfiguration is required if you upgrade.

Together with the 3½ inch disc drive, using durable rigid-cased diskettes that store 800 Kbytes of programs or data in self-compacting format, the memory capacity of the Archimedes 410/1 computer allows you to run large sophisticated programs without excessive disc swapping.

Built-in graphics display controllers allow you to choose from a range of colour and mono monitors to suit your budget and the applications you wish to run, and to upgrade to a higher specification monitor without buying an additional graphics card. Similarly, a hard disc controller is built in so that you can easily add a hard disc at a later date, and the expansion backplane allows you to fit up to 4 special purpose expansion cards.

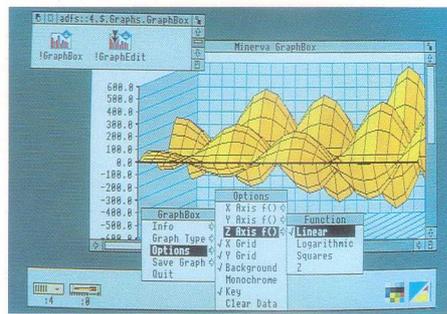


ARCHIMEDES 420/1 SYSTEM

The Archimedes 420/1 computer combines all the features of the 410/1 model with two important additions.

- Internal 20 Mbytes hard disc. (Formatted)
- 2 Mbytes RAM as standard

As soon as you become familiar with the benefits of using a computer with a hard disc, you begin to think of it as an essential. Not only do you have all your programs 'to hand' so that you can load any you choose without disc swapping, you also find they load much more quickly. The fast hard disc complements RISC OS by keeping all your programs and data within quick pointing range of your mouse.



If you run really memory intensive programs, such as desktop publishing, complex spreadsheets, or graphics applications, you will appreciate the additional memory capacity of the 2 Mbytes of RAM in the Archimedes 420/1 computer. Large documents, pictures and calculations can be manipulated more quickly. You also benefit from the larger RAM as you acquire more software capable of running simultaneously with RISC OS, and you are secure in the knowledge that you can easily add even more RAM, up to a total of 4 Mbytes, at a later date if you wish.

ARCHIMEDES 440/1 SYSTEM

The Archimedes 440/1 model is the flagship of the 400/1 range, featuring:

- 50 Mbytes hard disc. (Formatted)
- 4 Mbytes RAM as standard.

The larger hard disc and RAM of the 440/1 build on the facilities already offered by the 420/1. Whereas the 20 Mbytes hard disc of the 420/1 offers more than sufficient storage for many users, you may wish to build up large banks of data, or keep a great selection of software readily available.

Similarly, the 4 Mbytes of RAM of the Archimedes 440/1 computer provides the space for the most demanding of professional users running large applications and several processes simultaneously.

ARCHIMEDES 400/1 SERIES EXPANSION OPTIONS

The Archimedes 400/1 series allows you to choose the specification that best suits your requirements and budget, with the security of knowing that upgrades and expansions can be added progressively as your needs evolve. The 410/1 base model can be upgraded to the full specification of the 440/1 model, and all the Archimedes system options and expansion cards are compatible with all models of the 400/1 range.

Monitors:

You can choose from a range of monitors. The most popular is the Acorn Colour Monitor, which gives a superior display compared to the standard colour monitor offered with many PCs. It has 640 × 256 resolution and analogue input to handle the 4096 colour palette that the computer provides. Alternative monitors, including high resolution multi-scan colour, ultra-high resolution mono, and low-cost composite mono units, do not require different graphic cards.

Hard Discs:

You can add a hard disc to the Archimedes 410/1 computer – the controller is already fitted as standard.

PC Emulator:

The software PC Emulator loaded from disc enables the Archimedes computer to run an enormous library of MS-DOS programs written for IBM-compatible computers. After loading the emulator with its MS-DOS 3.21 system disc, you can simply insert an IBM-format disc and run the program from DOS. If your Archimedes computer has a hard disc, you can reserve part of it as a DOS partition for your MS-DOS programs and files.

Networking:

An optional internally-fitted Econet module provides instant connection to this widely used low-cost networking system. An Ethernet expansion card with suitable software will be introduced to allow connection to the 'industry-standard' networking system.

Expansion Cards:

The 400/1 series expansion backplane has four slots, all available for expansion cards. (Note that disc, display and standard communication port controllers do not use expansion card space.)

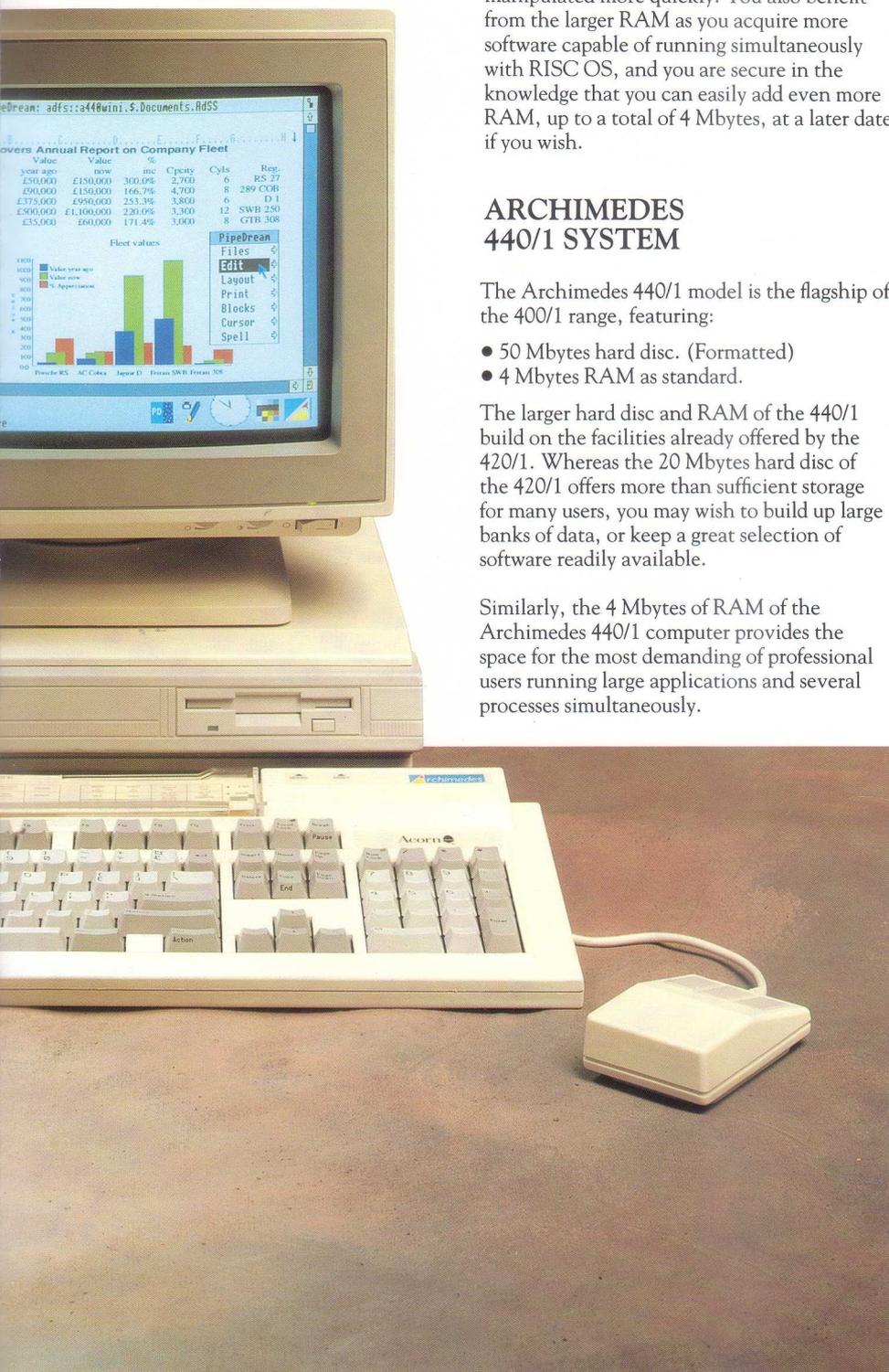
I/O Expansion Card for specialised communication and control functions, such as scientific instrumentation, or non-keyboard input systems.

ROM Expansion Card for specialised system development.

Floating Point Co-Processor Expansion Card increases the speed of highly intensive mathematical computations.

MIDI Expansion Card providing a standard control interface for electronic musical instruments. There is also a Midi upgrade to the I/O expansion card.

SCSI Expansion Card (to be introduced) gives access to multiple external peripherals such as hard discs and streaming tape together with printers, optical discs, scanners and other 'industry-standard' peripherals.



CENTRAL PROCESSING UNIT

- ARM (Acorn RISC Machine) 32 bit Reduced Instruction Set Computer processor
- **Processor speed:** 4 MIPS (MILLION INSTRUCTIONS PER SECOND)

MEMORY AND DATA STORAGE

	410/1	420/1	440/1
Dynamic RAM:	1 Mbyte	2 Mbytes	4 Mbytes
Maximum memory:	4 Mbytes *	4 Mbytes *	4 Mbytes
ROM	512 Kbytes	512 Kbytes	512 Kbytes
3.5" floppy disc	800 Kbytes	800 Kbytes	800 Kbytes
Hard disc (formatted) 1.1 interleave	as upgrade	20 Mbyte	50 Mbyte

*Dealer upgrade option

DISPLAY

- **Analogue RGB:** via 9-pin D type socket, supports 14" Acorn colour monitor (resolution up to 640 × 256) or multiscan colour monitors (resolution up to 640 × 512). The multiscan monitor shown in this brochure is the Taxan 770 PLUS.
- **High resolution monochrome:** resolution up to 1152 × 896 in graphics mode
- **Monochrome composite video**

SOUND

- Two channel stereo with seven stereo positions and eight voices
- Standard 3.5mm ohm stereo jack

KEYBOARD AND MOUSE

- 103 Key 'enhanced PC' layout keyboard
- Three button mouse

INTERFACES

- **Parallel port:** standard 25-pin D type socket Centronics 8 bit compatible
- **Serial port:** standard 9-pin RS232 D-type plug

ACORN EXPANSION OPTIONS

- Econet module (internal plug-in module)
- I/O expansion card
- MIDI expansion card
- ROM expansion card
- SCSI expansion card
- Floating Point Co-processor expansion card
- **A410/1 only:** Additional floppy disc
- 1 Mbyte RAM upgrade (not A440/1)

STANDARD SOFTWARE

- **Built-in software in ROM:**
- RISC Operating System (RISC OS)
- Desktop Manager mouse and pointer system
- Advanced Disc Filing System (ADFS)
- Advanced Network Filing System (ANFS)
- BBC BASIC V
- Character sets: ISO 8859, Latin 1-4, Greek
- Font manager
- Help

APPLICATIONS DISC 1:

- Configuration, Draw, Edit, Fonts, Help, Paint, Printer Drivers.

APPLICATIONS DISC 2:

- 6502 emulator, Alarm clock, Calculator, Lander game, Music demo, Magnifier utility, Electronic mail utilities, Patience game, Puzzle game, BASIC Editor

DOCUMENTATION

- Welcome guide, User guide, BBC BASIC guide.
- Programmer's reference manual (optional)

THIRD PARTY EXPANSION OPTIONS

Many other options, such as the IEEE 488 interface, video digitisers, sound samplers and external floppy and hard disc units, are available from third party suppliers. Please refer to the Archimedes applications catalogue.

Every effort has been made to ensure that the information in this brochure is true and correct at the time of going to press. However, the products described in this brochure are subject to continuous development and improvement and Acorn Computers Limited reserves the right to change their specification at any time. Acorn Computers Limited cannot accept any liability for any loss or damage arising from the use of any information or particulars in this brochure.

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