# Acorn Computers

*Vision for the future*



Professional

educational!

portable

innovative

easy to use
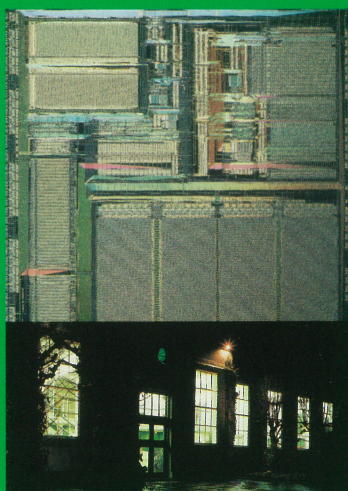
POWER

Acorn

Since its foundation in 1979, Acorn Computers Limited has won international recognition as a market leader in innovative personal computer products and services. Acorn is committed to research and development, to high quality product design and manufacture, and to the highest levels of support for its customers. Acorn computers offer class-leading performance, modern design and state-of-the-art software in a range spanning desktop publishing workstations to handheld portables.

Acorn's design philosophy encompasses long-term reliability and a forward upgrade strategy. This approach ensures that Acorn's customers benefit from their computers long after competitive products have ceased to have value.

### A range of high performance computers

Acorn's ability to control all aspects of its product development has resulted in a highly acclaimed range of high-performance low-cost computer systems. This range of 32-bit RISC computers is built around a family of advanced processors based on Acorn's original ARM design and further developed by Advanced RISC Machines Limited – a company co-founded by Acorn.

### Award-winning RISC technology

Acorn has won two Queen's Awards for Technological Achievement (1984, 1992) the latter being for the successful development and commercial exploitation of the ARM RISC technology in desktop and portable computers. ARM technology provides high-performance, low power consumption and a reduction in the total number of components required. As a result of this approach, relative performance is dramatically improved, reliability increased and costs reduced.
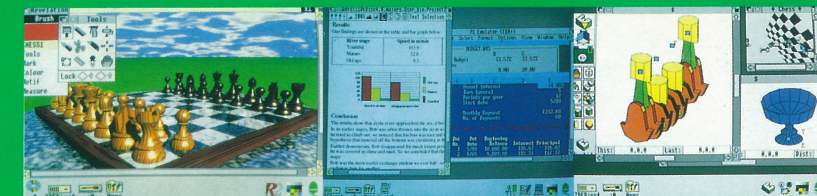
### The ARM family of processors

The ARM family is based on compact high-performance macro cell designs. As well as a range of processors, additional ARM chips provide optimised video, sound, memory and I/O management. The new ARM250 processor powers the latest and lowest-priced members of the Acorn family, providing a performance factor against a 33Mhz 386DX PC of 1.4. The ARM3 processor which is used in Acorn's higher end systems is more than twice as powerful and achieves performance figures in excess of 20,000 Dhrystones*.

### RISC OS – Acorn's RISC operating system

To take full advantage of the power and performance of the ARM family, Acorn has developed RISC OS. It is a functionally rich operating system which offers novices a comfortable environment in which to take their first steps, is powerful and flexible enough to cater for the most discerning professional user, and provides a state-of-the-art development environment for software writers.

Because RISC OS is developed and optimised specifically for the ARM range of RISC processors, it offers outstanding technical performance in terms of response times, memory management and disc utilisation. As a result Acorn computers significantly outperform larger and more expensive computers from other manufacturers.

RISC OS has a graphical user interface (GUI) which provides a high degree of consistency allowing users to learn new software packages quickly and easily. RISC OS allows you to combine and use a wide variety of material from different applications or even from non-Acorn systems.

Text, images, sound, graphics and video can all be combined to give true multimedia capability on all Acorn computers.

RISC OS spans Acorn's entire range of RISC computers.

### A wealth of software applications

The superb development environment of RISC OS is complemented by Acorn's commitment to building partnerships with software developers. Today thousands of software packages are available which share the RISC OS 'look and feel', providing a consistent approach for users wishing to use several different applications. This consistency makes Acorn's systems easy to learn and easy to use.

Acorn's design philosophy also ensures that previous generations of Acorn RISC computers can utilise the latest improvements offered

THE QUEEN'S AWARD FOR TECHNOLOGICAL ACHIEVEMENT.

* Acorn figures

by RISC OS 3. Third-party partners also give access to a complete range of professional peripheral devices such as printers, scanners, digitisers and CD-ROMs.

## Integrating DOS software

Acorn PC Soft is a software application which allows users to run PC DOS applications on any Acorn 32-bit computer. Acorn PC Soft provides a cost effective environment for RISC OS users wishing to use DOS applications and allows RISC OS and DOS applications to coexist on the same computer.
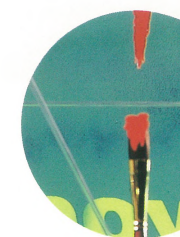
RISC OS provides a consistent interface and data can be transferred between the different environments seamlessly. In addition, RISC OS allows data discs from DOS machines to be read and used even without Acorn PC Soft being present.

## Setting standards

As well as setting the standard in both educational computing and in the special needs arena for more than 12 years, Acorn computers are used throughout the world in the corporate, professional and consumer marketplaces, in areas such as professional publishing, image processing and multimedia.

*Acorn is committed to delivering the innovation, quality and support that all of its customers demand.*

## Acorn A3000 series

- **Latest ARM250 processor**
- **Cost-effective solutions for the home and education**
- **Supports a range of monitor types**
- **Compact, space-saving 2 box design**

Acorn has introduced a new range of A3000 series computers. The Acorn A3010 has been designed for the home user and comes as part of *The Family Solution* – a family learning and entertainment centre – and also as part of the well established *Learning Curve* range. The A3020, with its expandability and range of memory options, has been purpose designed for our customers within education. It uses the same mini expansion port as the BBC A3000 and in addition offers a 'universal' network connector and provision for an internal hard drive. As with all products in the Acorn RISC range, every new A3000 series computer comes with an extensive application suite including a painting package, a powerful drawing program, a text editor and a music creation and editing program.

*A3010*

**The Family Solution**
– A3010 computer
– Comprehensive application suite
– EasiWord – word processor
– Exciting game
– Comprehensive audio training tape

**The Learning Curve**
– A3010 computer with 2MB RAM
– Comprehensive application suite
– EasiWord – word processor
– The Genesis Collection
– Acorn PC Soft
– The Learning Curve magazine
– Comprehensive audio training tape
– Parental guide to the National Curriculum

*The Acorn A3010 includes*
– Powerful 32-bit ARM 250 processor
– 1MB RAM (expandable to 2MB)
– TV modulator
– 2 joystick ports
– Integral 2MB (unformatted) floppy disc drive
– Expansion port
– Stereo sound socket and speaker
– 3 button mouse
– Printer and serial ports

*Special Access Upgrade Pack:*
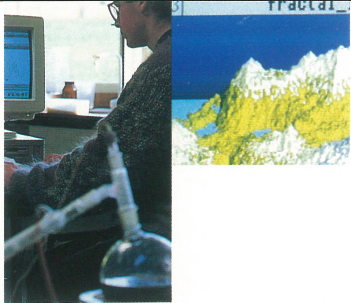*See Acorn A4000 for details*

*A3020*

**A3020 FD**
– Powerful 32-bit ARM250 processor
– Comprehensive application suite
– 2MB RAM (optional upgrade to 4MB)
– Integral 2MB (unformatted) floppy disc drive
– Expansion port
– Stereo sound socket and speaker
– Optional hard disc
– Network interface connector (Econet and Ethernet options)
– 3 button mouse
– Printer and serial ports

**A3020 2MB HD60**
– Powerful 32-bit ARM250 processor
– Comprehensive application suite
– 2MB RAM (optional upgrade to 4MB)
– Integral 2MB (unformatted) floppy disc drive
– Expansion port
– Stereo sound socket and speaker
– Integral 60MB hard disc
– Network interface connector (Econet and Ethernet options)
– 3 button mouse
– Printer and serial ports

*The monitor shown with the A3010 is an optional purchase*

## Acorn A4000

- **Latest ARM250 processor**
- **Slimline 3-box design with enhanced PC-style keyboard and mouse**
- **Fast industry standard 80MB hard disc (IDE)**

The A4000 is one of the latest in the range of 32-bit RISC computers from Acorn. It combines the features of the new A3000 series computers with a 3-box design that is based upon the highly successful Acorn A5000. It has a large industry standard hard disc with 80MB of storage, ideal for large amounts of data, text and graphics. For the home user, the A4000, as part of *The Home Office* pack, offers the complete office at home, including database, word processor and optional inkjet printer.

*A4000*

### The Home Office
– A4000 2MB HD80
– EasiWriter – advanced word processor
– Desktop Database
– Comprehensive audio training tape
– Optional Acorn JP150 printer

### A4000 2MB HD80
– Powerful 32-bit ARM250 processor
– Comprehensive application suite
– 2MB RAM (optional upgrade to 4MB)
– Integral 2MB (unformatted) floppy disc drive
– Expansion port
– Stereo sound socket and speaker
– Integral 80MB hard disc
– Network interface connector (Econet and Ethernet options)
– 3 button mouse
– Printer and serial ports

### Special Access Upgrade Pack
– Disc of Special Access utilities
– Special Access Guide
– Acorn A – Z of Special Needs
– Expansion card to connect peripherals e.g. keyboards, switches, touchscreens

## Acorn A5000 series

*A5000*

- **Powerful ARM3 processor**
- **Range of hard disc or discless machines**
- **4 expansion ports for interface cards**

Acorn has expanded its range of A5000 computers to meet the requirements of its customers. The A5000 series of computers offers a range of hard disc options. Two network models are available for users who do not have a requirement for hard disc storage on their networks. For the professional home user who requires the additional processing power, the A5000 Learning Curve offers a complete family learning centre including desktop publishing and PC software compatibility as standard.

The A5000 also forms the basis of a range of professional publishing systems. These incorporate the user's choice of professional quality software, scanners and printers.

### A5000 Learning Curve
– A5000 2MB HD80
– Acorn Desktop Publisher
– 1st Word Plus
– Genesis Plus
– Pacmania
– Acorn PC Soft
– Comprehensive audio training tape
– Guide to the National Curriculum

### Acorn Publishing Systems
– A5000 computer
– Selection of professional quality scalable fonts
– Standard PostScript production
– Publishing bureau compatible
– Extensive expansion options
– Access to DOS directories and files

*Available from specialist dealers*
*Separate brochure available*

### A5000 2MB HD80
– Powerful 32-bit ARM 3 processor
– 2MB RAM (expandable to 4MB)
– Comprehensive application suite
– 2MB (unformatted) floppy disc
– 4 expansion card slots
– Stereo sound socket and speaker
– Econet/Ethernet capability
– 80MB IDE hard disc
– 3 button mouse
– Printer and serial ports

### A5000 4MB HD120
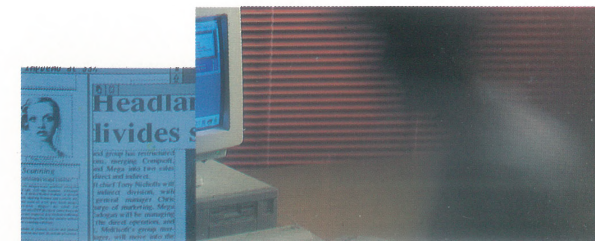As above but with 120MB IDE hard disc and 4MB RAM
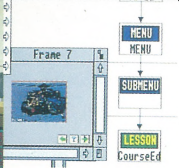
### A5000 2MB ES station
Optimised to meet your Econet networking requirements

### A5000 2MB NS station
Optimised to meet your Ethernet networking requirements

*See separate AUN brochure for details*

## Acorn A540

- **Powerful ARM3 processor**
- **Memory upgradable to 16Mbytes**
- **SCSI Interface**
- **SuperVGA resolution graphics support**

The Acorn A540 is designed with the professional in mind and is ideal for software engineering, complex multimedia development and professional desktop publishing. The ARM3 chip at the heart of the A540 gives over 13.5 MIPS performance and meets the requirements of even the most demanding user. With its contiguous RAM expandable from 4 to 16 Mbytes, the A540 is ideal for applications which have a large memory requirement.

The A540 comes complete with a SCSI card which supports the internal 120MB hard disc and also gives access to a wide range of peripherals from scanners to CD-ROM drives. Up to seven standard SCSI devices can be attached, allowing the maximum flexibility with standard devices.
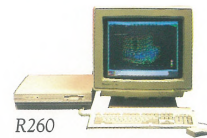
### Acorn A540
- Powerful 32-bit ARM3 processor
- Comprehensive application suite
- 4MB RAM (upgradable to 16MB)
- Integral 1MB (unformatted) floppy disc drive
- 3 expansion slots
- Stereo sound socket and speaker
- 120MB SCSI hard disc
- 3 button mouse
- Printer and serial ports
- Optional upgrade to RISC OS 3

### Acorn Publishing Systems
- A540 computer
- Selection of professional quality scalable fonts
- Standard PostScript production
- Publishing bureau compatible
- Extensive expansion options
- Access to DOS directories and files (*additional software required on A540*)
- Available from specialist dealers

*A540*

## Acorn's UNIX range

*R260*

- **Industry standard operating system**
- **X/Open compliant**
- **Comprehensive software pack**

RISC *iX* is Acorn's X/Open XPG3-compliant UNIX. It is designed to exploit the power and performance of the ARM3 processor and was one of the first systems to be validated to X/Open's demanding standard. RISC *iX* is available on the R260 workstation or as an optional upgrade for the A540. It is supplied with software including the X Windows System, X.desktop, TCP/IP, C, Pascal, Fortran 77, Programmers toolkit, documentation, NFS 4.0 and ONC.

X/Open
BASE XPG3 Ⓧ

### Acorn R260
As for the A540 but with:
- 8MB RAM
- RISC *iX* 1.2 pre-installed
- Ethernet card
- On-site maintenance

*Monitors are optional purchases and not included with any of the products described above*

## Acorn A4 series

- **Powerful ARM3 processor**
- **Portable, powerful and practical**
- **The A5000 in a notebook format**

The Acorn A4 is the very latest in notebook technology, with all the features and benefits of a high performance Acorn computer. No longer will you be restricted to one choice of working environment. From home to work, room to room, on or off site, the A4 will give you total flexibility.
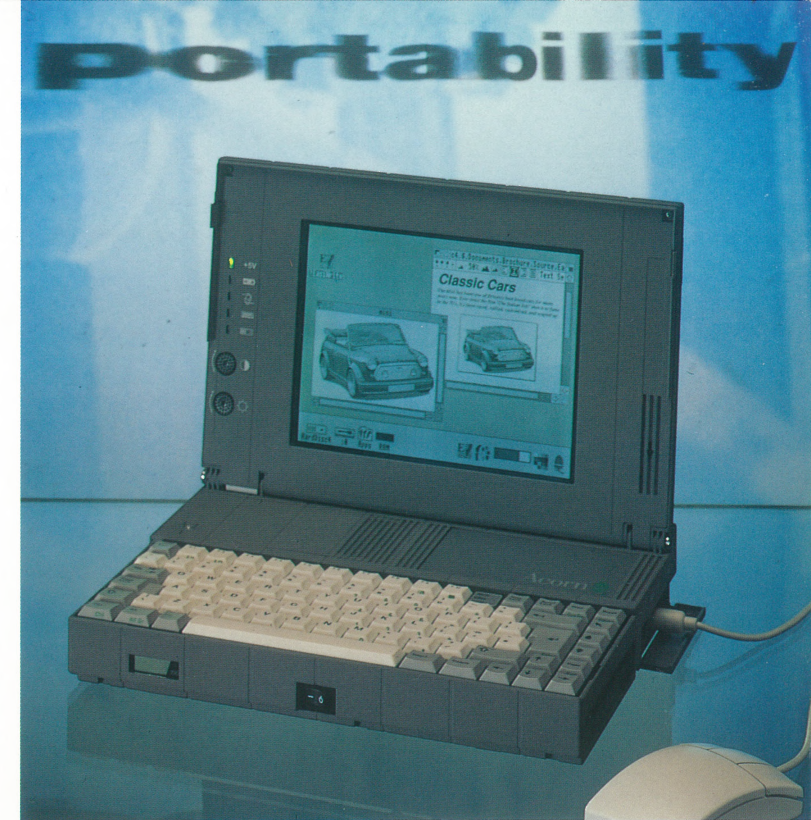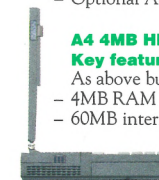
### A4 2MB FD
**Key features**
- Powerful 32-bit ARM3 processor
- Comprehensive application suite
- 2MB RAM (upgradable to 4MB)
- Integral 2MB (unformatted) floppy disc drive
- Stereo sound socket and speaker
- Optional hard disc
- 3 button mouse with keyboard emulation
- Printer and serial ports
- Multi-voltage mains adaptor
- Full size (640 x 480) screen – greyscale
- Full range of Acorn colour monitors supported without additional hardware
- Robust battery pack providing between 2.5 and 3.5 hours of normal use
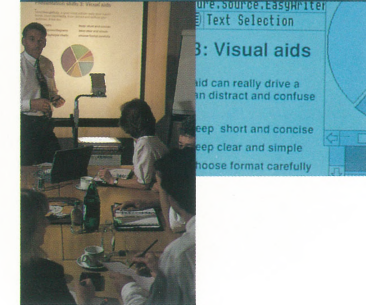- Soft case
- Optional Acorn PC Soft

### A4 4MB HD60
**Key features**
As above but with:
- 4MB RAM
- 60MB internal hard disc
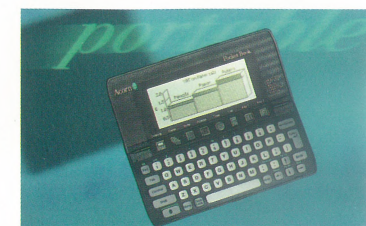
*A4*

## Acorn Pocket Book

- **The educational computer that fits into your pocket**

Small and light enough to be carried around by a small child, the Acorn Pocket Book has a range of tools which allow for the creation and storage of information. Software is provided allowing easy access to Acorn's 32-bit computers.
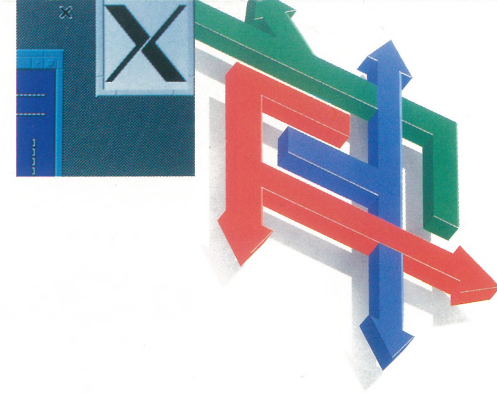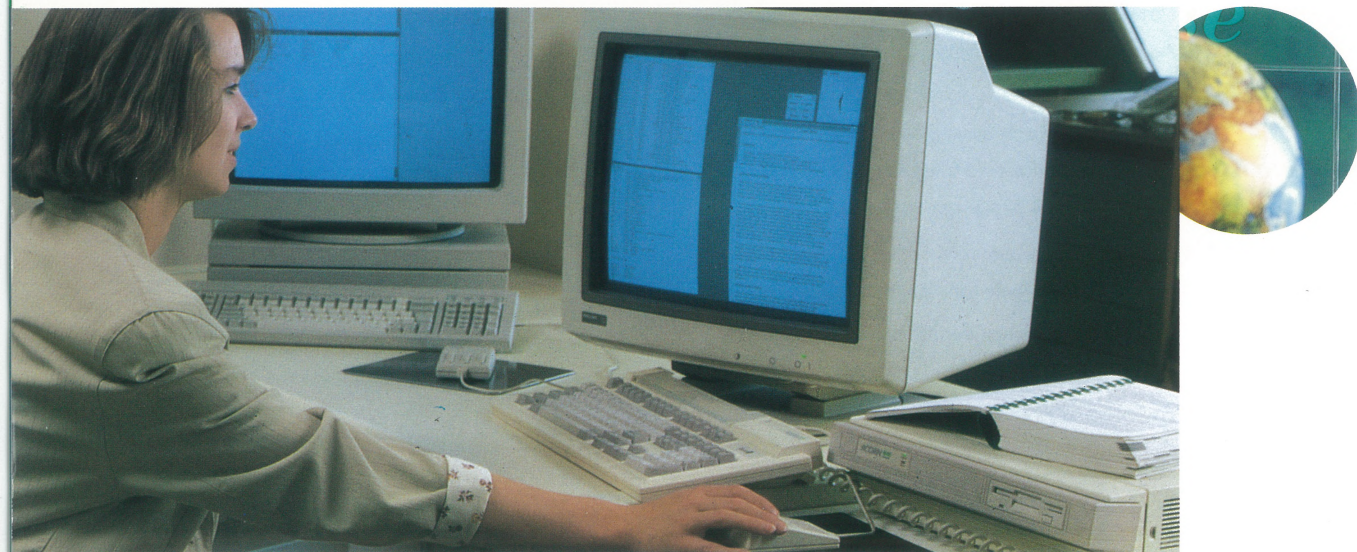
**Key features**
- Built-in applications: word processor, spelling checker, scientific calculator, spreadsheet and database
- Easy to use: multi-tasking windowing operating system – switch between applications with a single key press
- Long life battery: on average, 80 hours use from two AA batteries
- Grows to meet your requirements: 256K RAM, Solid State Disc (SSD) drives provide up to 4Mbytes of data storage
*See separate leaflet for full specification*
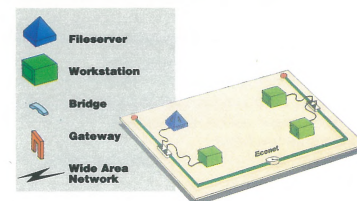
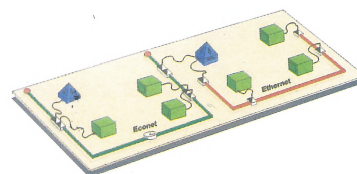*Pocket Book*

## Talking to the world



- **A range of cost effective, easy to use network options**
- **Resource sharing from small cluster to department to whole site or beyond**
- **Run your Acorn computer alongside your corporate PC or UNIX host**

The ability for IT users to be able to communicate with each other and with other computers is now recognised as one of the key factors governing the success of enterprises as diverse as commercial multi-nationals and village schools. Acorn Universal Networking (AUN) provides a framework for the introduction of and access to new technologies into new and existing Acorn sites. By incorporating the relevant industry standards such as TCP/IP and the concepts of Open Systems, AUN enables different computer types to be interconnected.
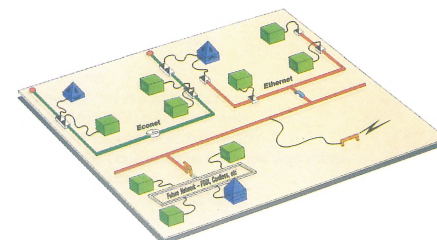
*See AUN brochure for full details*



Small cluster network created with Acorn's popular and ultra low-cost Econet



Econet and Ethernet clusters linked via a gateway (fileserver on Ethernet cluster)



Departmental network based on a mixture of different technologies all connected to a backbone linking them to each other and to external resources

## Acorn's commitment to total customer care and support

The reliability of Acorn products is proven daily in some of the most demanding environments from the school classroom to large scale industrial plants. Acorn computers come complete with a one year warranty, with optional extended warranty plans available to give you total peace of mind for up to 3 years. Support is provided locally via our reseller network or nationally via specialist maintenance organisations.

All Acorn computers are certified to relevant national and international safety standards. The latest members of the range have EN 60950 and BS7002 safety marks.

In addition to normal hardware services, Acorn provides information and expertise through its network of specialist resellers and Acorn in Education Centres. Independent software and hardware vendors also benefit from Acorn's active third-party partnership program. As a result a wide and expanding range of products is being developed to enhance further the use of Acorn products. Training on hardware and software for applications is offered at our Cambridge Training Centre and through accredited regional centres.

Acorn's commitment to total customer care involves listening to our customers' requirements and responding to their needs to ensure the best solutions with the highest quality support.

*Acorn invites you to share in its vision for the future.*

# Specifications

| Hardware | A3000 1MB FD | A3010 1MB FD | A3010 2MB FD | A3020 2MB FD | A3020 2MB HD60 | A4000 2MB HD80 | A5000 2MB HD80 | A5000 4MB HD120 | A5000 2MB ES | A5000 2MB NS | A540 4MB HD120 | A4 2MB FD | A4 4MB HD60 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CPU (32-bit RISC architecture) | ARM2 | ARM250 | ARM250 | ARM250 | ARM250 | ARM250 | ARM3 | ARM3 | ARM3 | ARM3 | ARM3 | ARM3 | ARM3 |
| Acorn relative performance factor | 1 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 3.1 | 3.1 | 3.1 | 3.1 | 3.2 | 2.9 | 2.9 |
| Operating system (RISC OS) version | 2* | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2* | 3 | 3 |
| Main memory | 1MB | 1MB | 2MB | 2MB | 2MB | 2MB | 2MB | 4MB | 2MB | 2MB | 4MB | 2MB | 4MB |
| Expandable to | 2MB | 2MB | 2MB | 4MB | 4MB | 4MB | 4MB | 4MB | 4MB | 4MB | 16MB | 4MB | 4MB |
| ROM | 512K* | 2MB | 2MB | 2MB | 2MB | 2MB | 2MB | 2MB | 2MB | 2MB | 512K* | 2MB | 2MB |
| Embedded cache | | | | | | | • | • | • | • | • | • | • |
| Internal hard disc (formatted) | | ◇ | ◇ | ○ | 60MB | 80MB | 80MB | 120MB | | | 120MB | ○ | 60MB |
| 3.5" floppy disc (unformatted) | 1MB | 2MB | 2MB | 2MB | 2MB | 2MB | 2MB | 2MB | 2MB | 2MB | 1MB | 2MB | 2MB |
| Keyboard (103 key 'enhanced PC' layout) | • | • | • | • | • | • | • | • | • | • | • | | |
| Keyboard (internal 83 key PC layout) | | | | | | | | | | | | • | • |
| Mouse (3 button) | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Built-in speaker(s) | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Battery pack | | | | | | | | | | | | • | • |
| Multi-voltage mains adaptor | | | | | | | | | | | | • | • |
| **Interfaces** | | | | | | | | | | | | | |
| Parallel, Centronics ® compatible | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Serial, RS232 | ○ | • | • | • | • | • | • | • | • | • | • | • | • |
| Ethernet | | | | | ○ | ○ | ○ | ○ | ○ | • | ○ | | |
| Econet | ○ | | | | ○ | ○ | ○ | ○ | • | ○ | ○ | ○ | ○ |
| SCSI Controller | ◇ | ◇ | ◇ | ◇ | ◇ | ◇ | ○ | ○ | ○ | ○ | • | | |
| IDE Controller | ◇ | ◇ | ◇ | • | • | • | • | • | • | • | | • | • |
| 3.5mm jack for stereo sound | • | • | • | • | • | • | | | | | | | |
| Free expansion slots (mini) | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | |
| Free expansion slots (full) | | | | | | | 4 | 4 | 4 | 3 | 3 | | |
| Joystick ports | | 2 | 2 | | | | | | | | | | |
| **Display support[1]** | | | | | | | | | | | | | |
| Analogue RGB (640x256) up to 256 cols | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Multi-scan (640x480) up to 256 cols | • | • | • | • | • | • | • | • | • | • | • | • | • |
| VGA (640x480) with 16 cols | | • | • | • | • | • | • | • | • | • | • | • | • |
| VGA (640x480) with 256 cols | | • | • | • | • | • | • | • | • | • | • | • | • |
| Super VGA (800x600) with 16 cols | | | | | | | | | | | • | | |
| High resolution (1152x900) mono | | | | | | | | | | | • | | |
| PAL (UHF) TV | | • | • | | | | | | | | | | |
| SCART TV[2] | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | | ○ | ○ |
| LCD (VGA) 640x480 with 15 greyscales | | | | | | | | | | | | • | • |
| **Complete solutions** | | | | | | | | | | | | | |
| Family Solution | | • | | | | | | | | | | | |
| Learning Curve | | | • | | | | • | | | | | | |
| Home Office | | | | | | • | | | | | | | |
| Special Access Upgrade Pack[3] | | • | • | • | • | | • | • | • | • | | | |
| Publishing System | | | | | | | • | | | | • | | |

**Key** • standard  ○ optional  ◇ third party product  [1] with suitable monitor  [2] with suitable lead  [3] only available at the time of computer purchase  * RISC OS 3 available as a 2MB ROM upgrade

https://classic.technology

Aitch Design Consultancy, St Ives

ARM

Acorn