Archimedes

HIGH PERFORMANCE COMPUTER SYSTEMS

THE NAME

Acorn is proud to announce a real breakthrough in computer technology; the ARCHIMEDES High Performance Computer Systems, the fastest† micros in the world today.

The ARCHIMEDES systems reflect a combination of education, technology, science and innovation, fitting, we believe, for a product that presents to the world a dramatic increase in computing performance.

THE NEED

The British Broadcasting Corporation Microcomputer, launched in 1981, was a phenomenal success. Since then, nearly a million British Broadcasting Corporation Micros have been sold and a huge user base established.

It became clear that there was a need to produce an affordable generation of computers for the 1990s as radical as the British Broadcasting Corporation Micro has been in the 1980s.

THE POWER

● ARTHUR, a new version of the British Broadcasting Corporation machine operating system.

● Power to deliver 6502 and MS-DOS emulation and high level languages such as C and FORTRAN.

● Power to run programs in BBC BASIC V (an extended version of BBC BASIC) that outperform those in machine code on most rival machines.

● In line with the importance Acorn attaches to networking, ARCHIMEDES machines can be used on the ECONET Network (with other British Broadcasting Corporation Micros) and ADFS/ANFS filing systems provide a familiar environment.

● The most visible demonstration of speed and power is reflected in the graphics: realistic animation with superb shadow and three dimensional effects. Up to 256 colours can be displayed at one time. Colours can be selected from a palette of 4096.

● The audio capability is astounding. Eight voice digital stereo sound provides considerable scope for musical composition.

AND SPEED

At the heart of the new technology lies the 32 bit Acorn RISC chip, a new type of processor capable of executing 4 mips (million instructions per second). In fact in our research and development laboratories up to 18 mips (peak) have been achieved on Acorn RISC processors.

New Personal Computer World magazine benchmarks for interpreted BASIC

Machine	Language	Intmath	Benchteh	Trighg	Texture	Giraform	Score
Archimedes 300 Series	BBC Basic	0.36	0.28	1.82	4.2	6.5	6.5
IBM VX 286	GW Basic	0.09	1.05	8.09	35.9	4.85	*
IBM Model 30	Basic	2.6	3.4	25.4	36.3	14.2	13.6
IBM Model 50	Basic	1.4	2.04	12.5	20.8	7.92	10.7
IBM PC	BasicA	6.2	8.2	47.0	100.0	49.0	*
Amiga 2000	Amiga Basic	1.7	3.7	6.7	150.3	25.0	32.7
Olivetti M38	Basic	2.1	2.0	15.0	33.6	11.6	*
Acorn ST	ST Basic	1.5	3.5	7.9	44.8	92.7	56.0
Master 128	BBC Basic	2.5	4.3	43.0	14.2	22.0	38.6
Compaq 386	GW Basic	1.0	0.96	3.85	23.5	4.8	*
Mac II	compiled Basic & FPU	0.26	0.16	1.60	126.0	8.0	5.2

Notes: 300 Series figures are Acorn measurements of BBC BASIC in RAM using PCW algorithms. All other figures are taken from PCW reports.
*Not available for floppy drives.

†The ARCHIMEDES High Performance Computer Systems, the fastest at their class to date.

THE SYSTEMS

The ARCHIMEDES range includes the 300 Series and the more sophisticated 400 Series.

All machines have features in common:
- 32 bit RISC technology
- ergonomically styled in a 3 box presentation
- 'IBM enhanced' style keyboard with 3 button mouse
- British Broadcasting Corporation Micro style operating system (ARTHUR)
- BBC BASIC V
- interfaces: printer, serial, monitor, stereo sound
- ECONET plug-in option
- a variety of podules can be fitted

300 SERIES

Latest generation of British Broadcasting Corporation Micros

305
- 0.5 Mbyte RAM (upgradable to 1.0 Mbyte)
- 512 Kbyte ROM
- 1 Mbyte (unformatted) 3½" disc drive

310
- 1.0 Mbyte RAM
- 512 Kbyte ROM
- 1 Mbyte (unformatted) 3½" disc drive

400 SERIES

New range of Acorn Computers

410
- 1 Mbyte RAM (upgradable to 4.0 Mbytes)
- 1 Mbyte (unformatted) 3½" disc drive
- Hardware floating point co-processor option
- Co-processor bus
- Hard disc controller
- Four-socket back plane
- 512 Kbyte ROM

440
Specification as 410:
- 4 Mbyte RAM
- 20 Mbyte hard disc

An additional 3½" disc or 20 Mbyte hard disc may be added internally. The 300 Series also requires a hard disc controller podule and back plane when fitting a hard disc.

ARCHIMEDES is an open system and its flexibility is achieved by fitting any of the following podules (peripheral modules) via a back plane:
- I/O (Input/Output Interface)
- hard disc controller (300 Series only)
- ROM extension board
- MIDI music interface
- MS-DOS podule
- SCSI
- hardware floating point co-processor
- Ethernet podule

SOFTWARE

The Welcome Disc:
- The Desk Top Manager, with calculator, note pad and clock.
- The Font Designer gives infinite flexibility in the creation of font styles.
- Discover the world of graphics with the easy-to-use Painting Program.
- The Music Program serves as an introduction to the ARCHIMEDES powerful sound capabilities.

In addition to BBC BASIC V, Acornsoft's development languages include C, ISO-Pascal, FORTRAN, Lisp and Prolog. The Acornsoft Software Developer's Toolbox provides utilities to simplify program development and debugging; while an extensive Software Developer's Debug Tool facilitates high level language development in C, Pascal or FORTRAN.

Acorn
The choice of experience.