apricot

4th Generation Personal Computers

by Roger Foster FCA
Founder and Group Managing Director of ACT

Each new generation of personal computers has brought major advances in hardware technology: from the early 8-bit 2nd generation machines to today's 3rd generation 16-bit systems, memory, mass storage and performance have all increased dramatically.

The 4th generation, led by ACT's Apricot, brings equally dramatic developments but most significantly, a major shift in design philosophy.

No longer is improvement in processing power and storage an end in itself. Instead, the 4th generation personal computer provides a single environment, complete and ready to work, to improve the productivity and efficiency of executives and professionals.

The computer hardware is easy-to-use and is fully integrated with powerful software which is simple and friendly, requiring no special skills to use it effectively.

4th generation computers can use a 'mouse' as a pointing device which reduces the need to use a keyboard. They will also feature a MicroScreen™, currently unique to Apricot, as a means of prompting and assisting the executive user.

Naturally, 4th generation systems offer increased memory and a powerful multiprocessor architecture – not as an end in itself, but to ensure that friendly, easy-to-use software will run quickly and efficiently.

The new software will relate intimately to the hardware. It will allow the user to perform a number of tasks concurrently, integrating several applications in a single package.

Routine desk top functions will be built-in. Apricot provides, as standard, a digital calendar and clock on the MicroScreen™. The calculator key instantly turns the MicroScreen™ into a full function calculator. A built-in auto dial modem option allows immediate connection to sophisticated electronic mail services and access to public databases.

4th generation machines will use 3.5" disk technology. Space saving and compact, these new drives are smaller and quieter than their 5.25" predecessors, and yet offer greater storage capacity. The diskettes have a tough plastic jacket to protect the delicate media at all times.

These space saving drives will help ensure that 4th generation computers are neat and compact on the desk with outstanding ergonomics.

And because the executive will not remain office bound the 4th generation system will offer portability, not as an overriding consideration but simply as a further feature aimed at improving efficiency.

Overall, the 4th generation personal computer provides a single environment, complete and ready to work, to improve the productivity and efficiency of executives and professionals.

The first 4th generation personal computer is here now.

apricot

Microscreen

Wed 29 Jun 83 13:00:00

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Multi-function keyboard

The Apricot keyboard is truly multi-functional, incorporating in one package every feature the executive needs to make full and productive use of his system. Pride of place goes to the MicroScreen™ – a unique two-line Liquid Crystal Display (LCD) and its six associated touch-sensitive keys.

This device, which incorporates a contrast adjuster, ensures that Apricot is a simple, easy-to-use system. It performs a variety of practical functions:
- It displays the day, date and time as soon as the system is powered up.

- Pressing the calculator key turns it into a powerful calculator without the need to load a disk.

- It provides dynamic labelling of the touch-sensitive keys within an application. If the user has six choices, all six keys are appropriately labelled. If only two choices exist, only two keys are labelled. At the same time a light appears on each key prompting the user to make a choice.

- It provides an entry line for information, ensuring that the user is not constantly switching from screen to keyboard and back again.

- And finally, it acts as a window on the screen, displaying a line at a time. As a result the system can be used without a full monitor, making it significantly more portable than many 'portables'.

The keyboard itself has 90 keys, all of which are full travel, fully debounced keyswitches. In addition, the Apricot uses its built-in sound generator to produce a reassuring electronic keyclick every time a key is pressed.

Eight fixed function keys are provided with proper English legends corresponding to the major functions inherent in all applications software – print, save, finish, help, etc.

There is a full suite of text editing keys, and as you would expect a numeric keypad including the standard calculator key instructions.

And finally, the Apricot keyboard has its own built-in 'mouse trap' – a fast serial port designed to connect a cursor control mouse device to make selections on the screen.

Apricot's multi-processor architecture

Unlike earlier generation personal computers the Apricot packs all its performance on a single sophisticated circuit board. Current leading 16-bit computers need as many as five circuit boards to offer the same functions as Apricot's one.
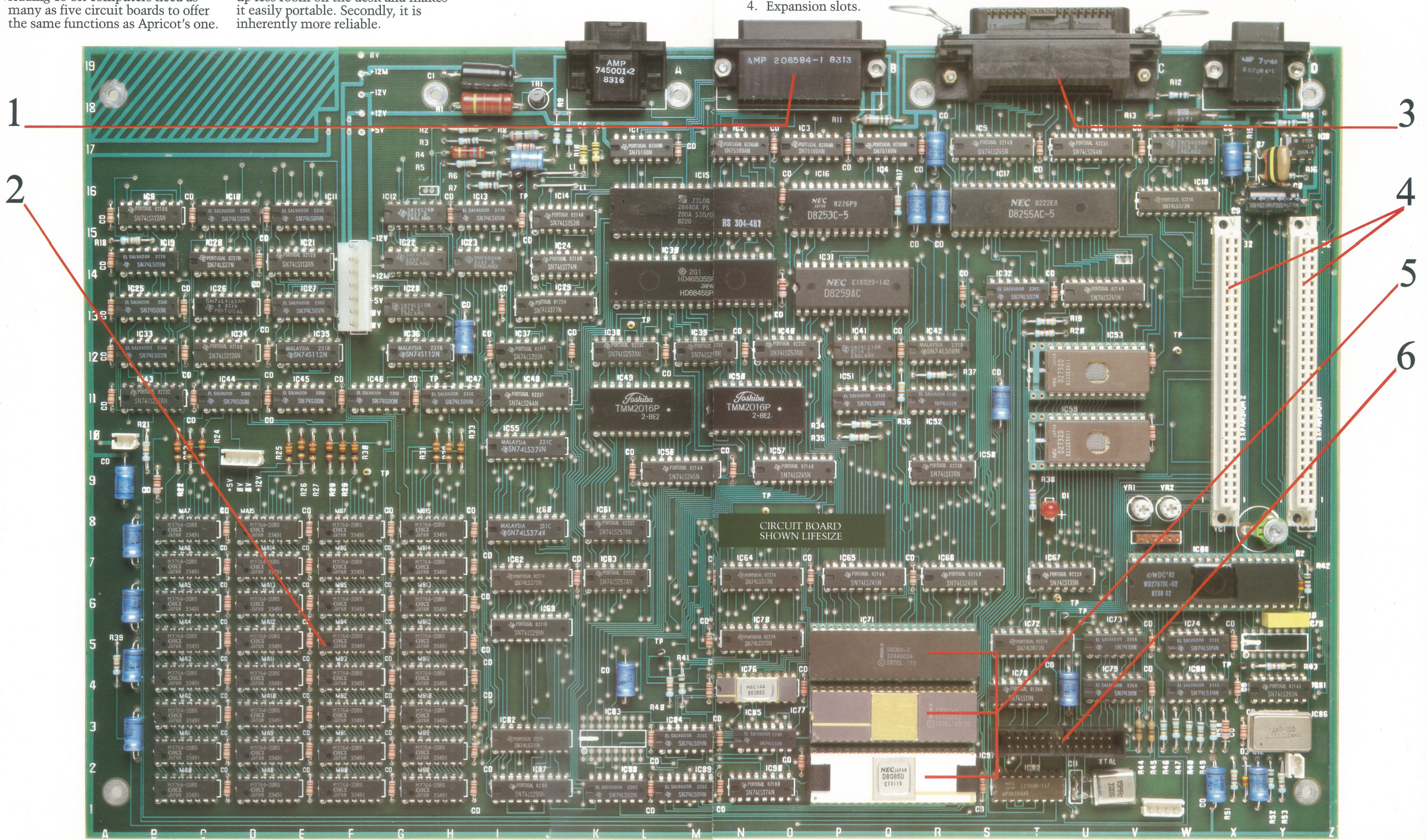
The compact single board approach offers the executive user two significant advantages. Firstly, it ensures that the computer takes up less room on the desk and makes it easily portable. Secondly, it is inherently more reliable.

Just compare these features:

1. RS 232 serial port for synchronous and asynchronous communications.

2. 256 Kbytes RAM as standard.

3. Standard parallel port.

4. Expansion slots.

5. 16-bit Multi-Processor Architecture. An Intel 8086 cpu and the optimised Intel 8089 input/output processor to handle disk drives and communications. And as an option, the powerful Intel 8087 mathematics processor.

6. Input/output for one or two 3.5" Sony Micro Drives. Smaller, quieter and more reliable, these drives offer 315K bytes or 720K bytes of storage per drive.

CIRCUIT BOARD
SHOWN LIFESIZE

Outstanding ergonomics

Ergonomics is the interaction of man and his environment, and only Apricot offers such outstanding ergonomics in the computer environment. The desk top footprint is a fraction of that on 3rd generation systems. The screen is high resolution – 800 x 400 pixels, sharp, easy on the eyes and ideal for sophisticated graphics applications.

The keyboard is detachable and low profile. The monitor tilts, swivels and slides to suit every user and the mouse trap is on the keyboard, exactly where it should be.

The disk drives can be covered by a sliding door to give a neat, uncluttered appearance on the executive user's desk, and as you would expect, ACT's fine attention to detail means that the back of the machine looks as attractive as the front, right down to the engraved labels for the output ports to the colour matching connector cables.

A computer that, for the first time, works with you – not just for you.

Apricot – a superb software environment

The 4th generation personal computer is essentially a software innovation and Apricot fulfills this requirement by providing a first-class software environment at several levels.

BIOS Level

A 24 Kbyte disk cache offers significant speed improvements for commercial applications involving frequent disk accessing. The BIOS also implements its own print spooler and provides an automatic buffer for high speed communications and networking. It incorporates a GIOS to ensure that graphics applications can be developed far more easily than on existing systems.

Operating System Level

Three operating systems are included as standard – MS-DOS 2.0, CP/M-86 and Concurrent CP/M-86. Additional operating systems, such as the UCSD pSystem, are also available.

Language Level

Both MicroSoft BASIC and Personal BASIC from Digital Research are included, and the use of standard operating systems ensures that all the leading compiled languages are available, including C, PASCAL, BASIC, FORTRAN and COBOL.

Development Level

There is a full range of tools and utilities for software creation. Included with Apricot is the Graphics Kernel for graphics applications, as well as font generators, the MicroScreen™ driver and a whole host more.

Applications Level

Over 1,000 existing packages are designed to run on Apricot, many of which can be tailored to make effective use of the MicroScreen™ and the fixed function keys. This has been made possible by the close attention the Apricot designers have paid to compatibility: the Apricot is Sirius-compatible and IBM-compatible to ensure instant availability of quality software.

Communications Level

A high speed asynchronous communications package is provided with Apricot.

And converting software to Apricot's revolutionary 3.5" disks is quick and easy thanks to a transfer utility available now to transfer programs and data from the IBM and the Sirius to Apricot.

The net result of this sophisticated software environment is that the executive and professional user can select Apricot, confident that applications software best suited to his need will be available off the shelf.

Software Specfications

Operating systems:	MS-DOS 2.0 (included with system)
	CP/M-86, Concurrent CP/M-86 (Voucher included with system)
	UCSD pSystem *1 BOS system *2
Systems software:	Full utilities including character font generator, diskcopy routines, graphics kernel etc.
Languages:	Interpretive BASIC (included with system)
	Personal BASIC (Voucher included with system)
	PASCAL FORTRAN COBOL UCSD PASCAL C PL/1 C BASIC
Inclusive applications:	Asynchronous Communications Software
	SuperCalc *3
	SuperPlanner *3
	SuperWriter *3
	*1 from TDI *2 from MPSL *3 from SORCIM

ACT –
the force behind Apricot
Apricot has an impeccable pedigree

It is the direct result of almost 20 years experience in the application of computer technology to business. And it is yet another breakthrough for the UK's most successful computer company – ACT.

The Group's financial record speaks for itself. Over a decade of increasing profits and turnover; a compound growth rate of over 40%; consistent expansion without recourse to borrowings.
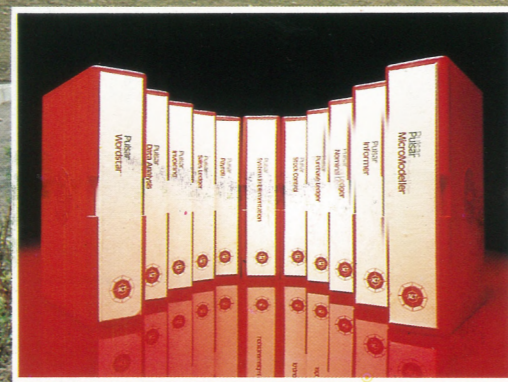
ACT – a public company with experience, stability and flair.

ACT's success lies in providing a single source for all computing needs. Today, the Group's activities span all the facets of computerisation and office automation, research and development.

Indeed, it was the fact that ACT supports the UK's largest personal computer software research team that made the development of the first of the 4th generation of computers possible.

From its conception, to the completion of a purpose-built 50,000 square feet manufacturing plant at Glenrothes in Scotland's Silicon Glen, Apricot represents an investment of over £10 million.

This new plant is equipped with the very latest production technology and is capable of manufacturing a machine every minute.

Apricot – the development of technology

Apricot's technical specifications speak for themselves. Apricot is a true 4th generation personal computer at an extremely competitive price.
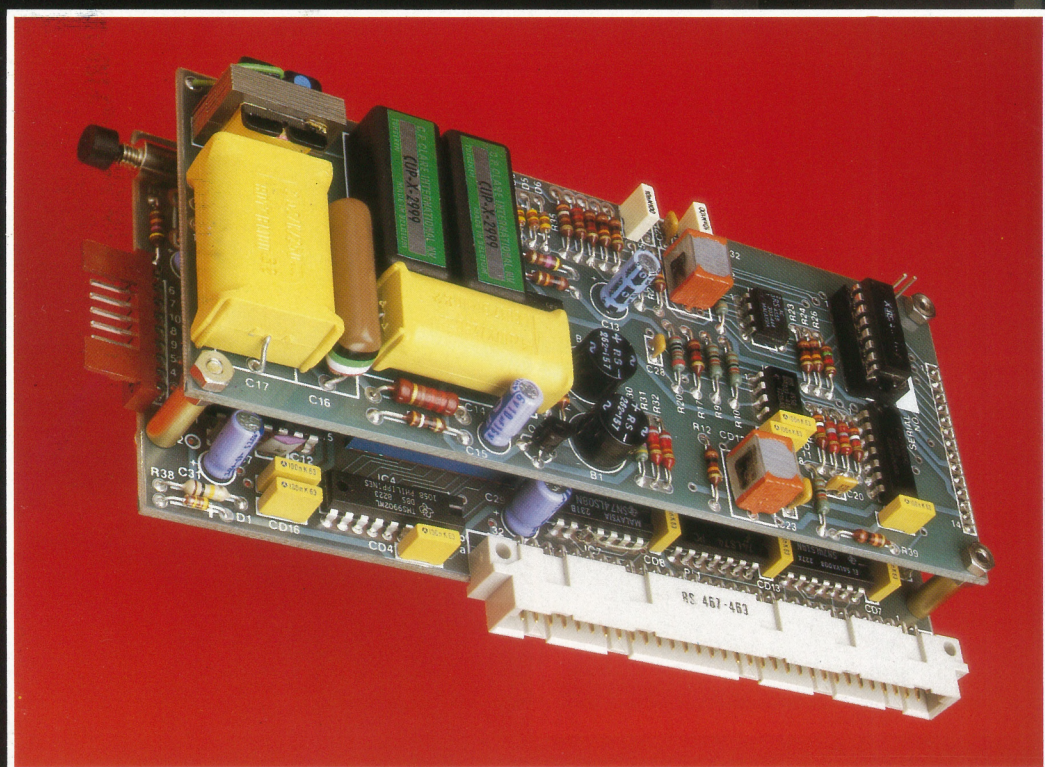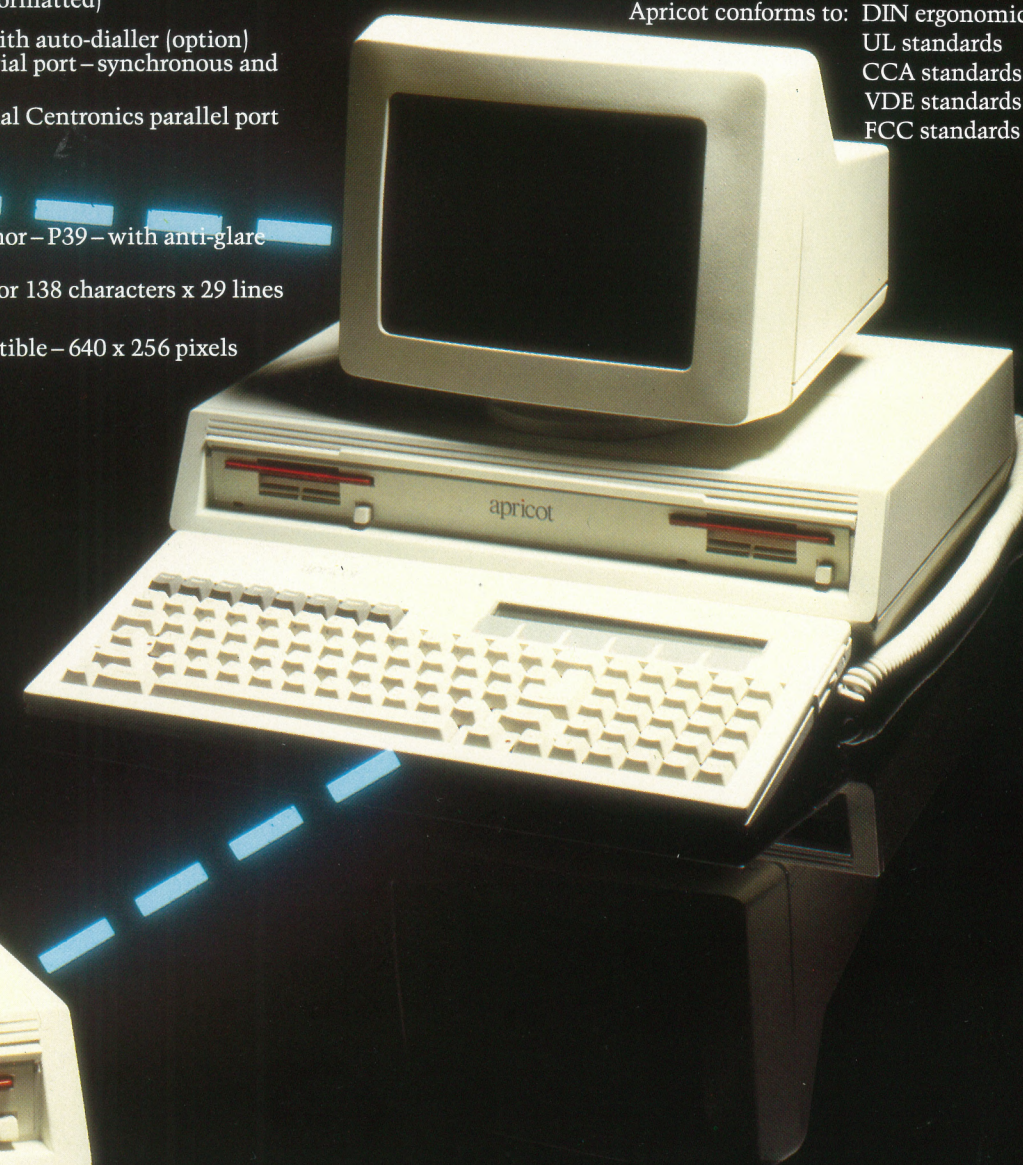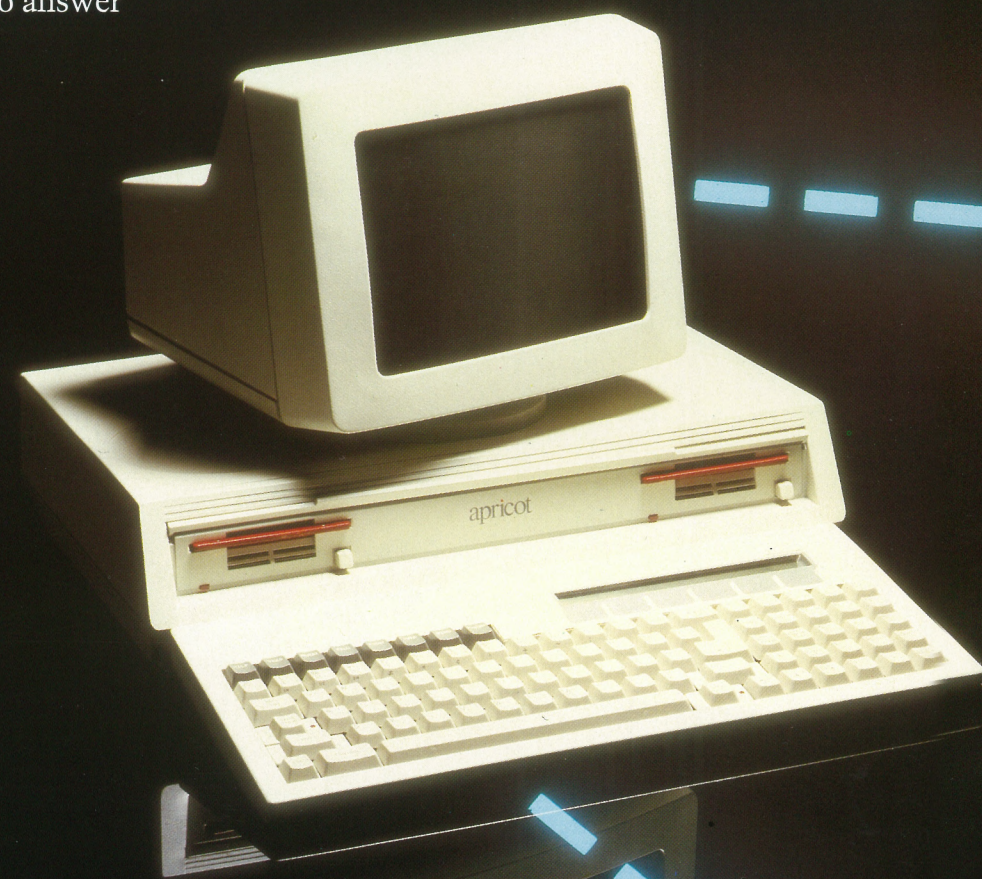
But ACT with its long standing commitment to research and development is not content to rest on its laurels.

The internal modem is the smallest full auto dial, auto answer modem available.

New Apricot Point 7 and Point 32 multi-user and network systems have been introduced to provide integrated computing facilities for large business or industrial applications. The Apricot Xi Winchester machine offers a powerful five or ten megabytes of internal hard disk storage, while the new Apricot F1 and Apricot Portable incorporate the very latest computer technology in the form of voice recognition and cordless keyboard connection.

However fast moving the technology, no one is moving as fast as ACT with its highly committed and motivated research and development team.

Apricot – the technical highlights

Hardware Specifications

Multi-processor architecture:	Intel 8086 running at 5 MHz
	Intel 8089 i/o management
	Intel 8087 Maths Co-processor (optional)
RAM capacity:	256K bytes standard, expandable to 768K bytes
Mass storage options:	(a) 1 x 3.5" single-sided Microfloppy (total capacity 315K formatted)
	(b) 2 x 3.5" single-sided Microfloppies (total capacity 630K formatted)
	(c) 2 x 3.5" double-sided Microfloppies (total capacity 1440K formatted)
	(d) 1 x 5 Mb 3.5" Winchester 1 x 3.5" single-sided Microfloppy (capacity 315K formatted)
	(e) 1 x 10 Mb 3.5" Winchester 1 x 3.5" double-sided Microfloppy (capacity 720K formatted)
Communications:	On-board modem with auto-dialler (option)
	1 x RS 232 (V-24) serial port – synchronous and asynchronous
	1 x 8 bit bi-directional Centronics parallel port
Display screens:	9" and 12" green phosphor – P39 – with anti-glare optical filter
	80 characters x 25 lines or 138 characters x 29 lines
	800 x 400 pixels
	10" colour – TTL compatible – 640 x 256 pixels

Keyboard display:	8 fixed function keys and 6 touch sensitive keys labelled by the Micro-screen™
	Alphanumeric layout to international standards

Dimensions:

Systems box:	16.5" wide x 4" high x 12.5" deep
9" Monitor – mono:	10.5" wide x 9" high x 10" deep
12" Monitor – mono:	13" wide x 11" high x 12" deep
10" Monitor – colour:	9.5" wide x 8.5" high x 12" deep
Keyboard:	16.5" wide x 2" high x 7" deep

Weight:

Systems box:	13.5 lbs to 15 lbs (depending on configuration)
9" Monitor – mono:	9.1 lbs
12" Monitor – mono:	17.5 lbs
10" Monitor – colour:	14 lbs
Keyboard:	3.3 lbs

Apricot conforms to:	DIN ergonomic standards
	UL standards
	CCA standards
	VDE standards
	FCC standards

Brochure design by MJM Artists

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The 4th Generation Executive Computer

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Printed in England KNP/0385/6M/I