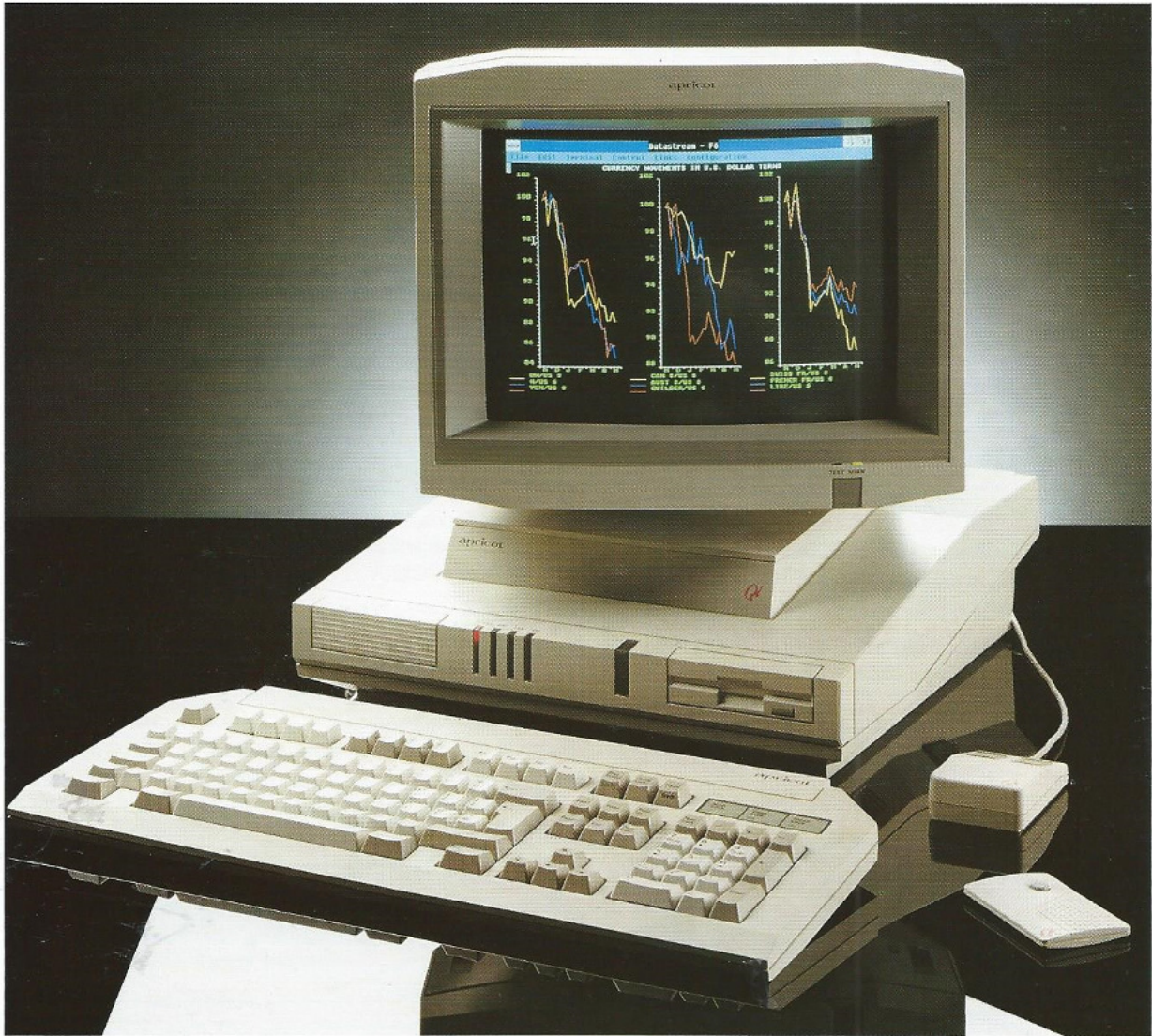




APRICOT

Qi 600 SERIES



The Qi 600 series is the ultimate personal workstation range. As a standalone machine, it's one of the most powerful performance PCs, utilising the fastest 32-bit processor technology available. With full IBM PS/2 compatibility, and the enhanced expansion capability of MCA architecture.

But Qi goes beyond desktop performance. It opens up the whole world of corporate computing resources to the PC user, with a series of unique, enhanced features in the key areas of networking, connectivity and security.

Qi



Apricot Qi's Integrated Network System includes Ethernet interfaces, a dual communications channel that can link, in conjunction with the Qi Environment software pack, directly to virtually every major systems environment. The specifically designed security system takes PC access security to the levels of most mini or mainframe systems.

Based on the Intel 386 Microprocessor, the Qi 600 series is available in two basic configurations – providing 47 or 118 Mbytes of hard disk storage – plus "L" variants of each system which feature an internal 40 Mbyte tape drive as standard.

PROCESSOR AND MEMORY

The Apricot Qi 600 Series is based on the Intel 386 Microprocessor, running at 20Mhz (Qi 650) or 25Mhz (Qi 660i). All models feature 32k of two way, set associative cache. Optional Intel 80387 numeric co-processors are also available, running at 20 or 25Mhz.

Each system features 1 Mbyte of high speed RAM as standard, expandable up to a maximum of 16 Mbytes on the main board using additional SIMMs. Further 32-bit memory can be added via the MCA expansion bus, up to a maximum of 4 Gigabytes.

Qi includes full support for the Lotus/Intel/Microsoft (LIM) Extended Memory Specification, allowing a wide range of MS-DOS applications to address memory above 640K. Extended memory can also be directly accessed by XENIX 386, OS/2 and Windows Presentation Manager.

PS/2 COMPATIBILITY

Apricot Qi incorporates a fully IBM PS/2 compatible four slot MCA bus, with two 16-bit and two 32-bit slots with full arbitration and Programmable Option Select registers, which replace the AT bus style hardware jumpers and switches providing ease of system configuration.

A wide range of MCA add in cards are already available including modems, additional memory, Token Ring, Corvus Omninet and Ethernet network cards, plus additional serial interfaces.

INTEGRATED NETWORK SYSTEM (INS)

INS ON-BOARD ETHERNET

Apricot Qi is built for connectivity. Every model features an Ethernet network interface built in to the main board as standard, giving Qi users immediate access to the world's leading network hardware standard, without the need for expensive add on boards.

Qi includes built in connections for both thick and thin wire Ethernet cabling systems, and the single chip controller provides high speed Direct Memory Access between the Ethernet cable and the main system memory allowing communications to be handled with full 80386 processing power.





INS DUAL COMMUNICATIONS CHANNEL

In addition to a standard serial and parallel interface, Qi includes a dual communications channel for either synchronous or asynchronous communications. All three serial ports are supported under MS-DOS, OS/2 and XENIX 386.

Using the device drivers supplied with the Apricot Qi Environment software pack, Qi can physically connect directly to a wide range of services. With three serial ports as standard, any Qi 600 system can also be used without modification as the host in a 2-4 user XENIX 386 system. Alternatively the Qi 600 Series is an ideal server within a local area network.



INS SECURITY

Apricot Qi features the most advanced security system ever developed for a personal computer. Using a combination of dedicated security hardware, security management software (supplied with Qi Environment) and a physical security card - the Qi Card - it can enable or restrict individual or groups of users



Security Management software included with Qi Environment

access to every I/O device in the system and provide a full audit trail of every system access.

Individual user access can be separately controlled for every I/O device including floppy and hard disk drives, serial and parallel ports, MCA slots and Ethernet access. Floppy drive access can be restricted to read only - an ideal system for preventing unauthorised copying of files by individual Qi workstation users. Future releases will include a user selectable file encryption facility to prevent unauthorised reading of files both from the casual user or following theft of the machine.

The Qi security hardware includes a built in microprocessor, battery backed RAM, ROM and real time clock, allowing individual user access to be restricted to specified time periods.

The Qi card is a hand held, credit size infra-red device which transmits a unique signal that can't be broken using infra-red copying devices. Each Qi can be programmed to recognise many different Qi cards allowing groups of authorised users to access the same or different machines.

The Qi card can be used to disable access to the machine temporarily at any time, providing fast, convenient security cover for

short working breaks. As soon as the authorised user returns, they can carry on working exactly where they left off without having to reboot the system.

The Qi is supplied as standard with a basic password control system. All other security features are accessible via the Qi Environment software pack.



When access is enabled, the user is asked to activate the Qi card and enter password.

MASS STORAGE OPTIONS

The Qi 660i features a high performance 118 Mbyte internal hard disk drive. With an average access speed of 15ms, it's designed to provide consistently fast response at the heart of a workstation, network or multi-user system.

The Qi 650 provides 47 mbytes of internal hard disk storage, with an access time of 28ms.

All Qi 600 Series machines feature a single 1.4 Mbyte 3.5" floppy drive. An external 5.25" drive can be fitted via the MCA bus as an expansion option. All 't' models feature a 40 Mbyte internal tape drive capable of backing up at a rate of 1.5 Mbytes per minute.

Internal 40 Mbyte tape drive.

DISPLAY ELECTRONICS

A VGA graphics microprocessor and 256K RAM are built in to the Qi motherboard as standard with an extension to the MCA bus for extended VGA.

Qi has been developed to provide exceptional graphics performance. Each image is accessed using an advanced display memory interleave system, giving a display response up to four times as fast as a conventional IBM PS/2 machine. Display performance can be further enhanced by mapping the display ROM into high speed RAM.

There's a choice of high resolution 14" colour or paper white monochrome monitors designed with flicker free display, full tilt and swivel viewing control and an etched, anti glare screen.

KEYBOARD

A standard ATE 102 key keyboard is provided with separate numeric and cursor control keypads and 12 function keys. For specific applications, any IBM PS/2 compatible keyboard can be used with Qi.

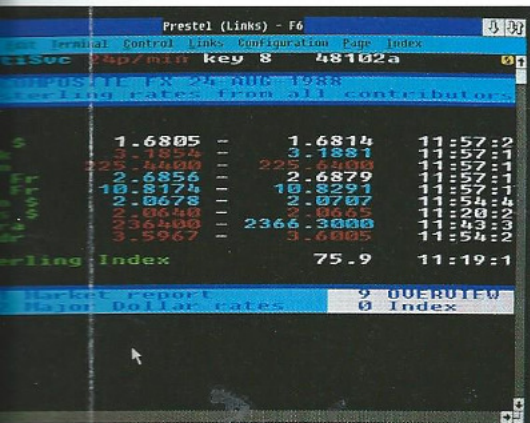


The Desktop Core provides access services like Pres



CONFIGURATION SOFTWARE

Apricot Qi includes a full set of system configuration functions and utilities including a powerful MCA configuration routine which uses industry standard Adapter Description Files to register all add-in cards with the system, eliminating the need for option switches on the expansion hardware.



Desktop Communications suite provides access to Viewdata services like Prestel.

APRICOT Qi ENVIRONMENT

The optional Apricot Qi Environment software pack comprises the Operating System Environment and support for the Integrated Network System (INS) hardware of the Apricot Qi range. Qi Environment provides the user interface facilities of MS Windows Presentation Manager, a two button PS/2 compatible mouse, plus access to the full range of enhanced security and communications facilities built in to the Qi range.



USER ENVIRONMENT

Windows Presentation Manager is a full multitasking environment, allowing users to run multiple Windows and MS-DOS applications simultaneously.

INTEGRATED NETWORK SYSTEM (INS)

The Qi Environment pack also provides a full suite of network and communications facilities allowing Apricot Qi to communicate directly with a variety of host systems via local and network connections.

INS DESKTOP COMMUNICATIONS

The Desktop Communications suite of Windows based terminal emulations include VT52, 100, 220, TTY and Viewdata. All terminal emulations support the Copy and DDE (Dynamic Data Exchange) windows facilities, allowing data to be posted into a word processing document or posted directly to a spreadsheet. Connections can be established via local or shared network modems via VX-Net or directly through the on-board communications ports.

A sophisticated telephone management system to automate and manage connections to other users by voice or data connections to hosts systems, X-Modem and Kermit file transfer facilities and electronic mail software are also provided.

INS DUAL COMMUNICATION CHANNEL SUPPORT

Qi Environment includes the software drivers to enable the dual async/sync communications ports for MS-DOS, OS/2 and XENIX 386. Qi can be used as a four station XENIX system without the need to purchase additional serial cards. A full set of API's (Application Interfaces) are provided to enable further software development.

INS SECURITY MANAGEMENT SOFTWARE

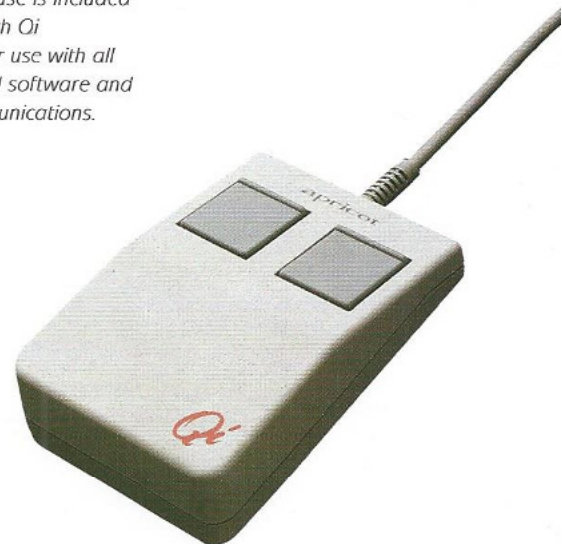
Qi Environment includes the security management software to operate in conjunction with the on-board security system and Qi cards.

IBM PS/2 COMPATIBLE MOUSE

A two button PS/2 compatible mouse is included as standard with Qi Environment for use with all Windows based software and Desktop Communications.



All Qi utilities including optional security are controlled by an easy to use menu system.





SPECIFICATION

Processor

Type: 386 Microprocessor
Clock frequency: 20MHz (Qi 650), 25MHz (660i)
Cache: 32K Byte (90%-95% hit rate)
Numeric co-processor:
Optional Intel 80387 maths co-processor, clocked at 20/25MHz

Micro Channel Architecture:

Slots: IBM PS/2 compatible
I/O address width: 16 bits allows 8,16,24 and 32-bit transfers within 64K range
Memory address width: 24 and 32-bits allows 8, 16 or 32-bit transfers within 16 Mbyte and 4GByte range
Arbitration control: Supports up to 15 devices
Direct memory access: 8 or 16-bit DMA channels
Special features:
Programmable Option Select registers
Error reporting and recovery
Level sensitive interrupts, with interrupt sharing on all levels

Memory

RAM: 1 Mbyte, (standard) operating at 0.37 (average) wait states (with cache)
Above memory: L.I.M. (Lotus/Intel/Microsoft) Extended Memory Specification V4.0
Memory expansion: Up to 16Mbytes on motherboard via SIMM sockets
Up to 4Gbytes via MCA bus

Communication Ports

Serial port: One PS/2 compatible asynchronous port
Parallel port: Bi-directional 25-way female D type

Display Electronics

Architecture: IBM VGA, with display memory interleaved for enhanced performance

Colour palette: 256,000

Graphic modes:

Resolution	Colours	Type
640 x 480	2 or 16	VGA
320 x 200	4 or 16	CGA
640 x 350	16	EGA
640 x 350	4	VGA
640 x 200	2 or 16	
320 x 200	256	VGA

Text modes: (16 colours) 420 x 200, 640 x 200, 320 x 350, 640 x 350, 360 x 400 (2 colours) - 720 x 400, 720 x 350

Monitors

14" Monochrome
Standard: Analogue VGA
Picture size: 231mm x 173mm
Tube phosphor: H17 paper-white
Horizontal scan rate: 31.5 KHz
Horizontal resolution: 640 or 720 dots
Vertical scan rate: 60 or 70Hz
Vertical resolution: 480 lines (60Hz), 350 or 400 lines (70Hz)
14" Colour
Standard: Analogue VGA
Picture size: 240mm x 180mm
Horizontal scan rate: 31.5KHz
Horizontal resolution: 640 or 720 dots
Vertical scan rate: 60 or 70Hz
Vertical resolution: 480 lines (60Hz), 350 or 400 lines (70Hz)

Mass storage

All Qi 600 series are fitted with 3.5" floppy drive
3.5" floppy disk drive
Formatted capacity: 1.44 Mbyte/720K
Track-track access: 15 ms
Data transfer rate: 500/250 Kbits/sec

Qi 650/650t

Formatted capacity: 47 Mbytes
Average access: 28 ms
Track-track access: 8 ms
Data transfer rate: 7.5 Mbits/sec

Qi 660i/660ti

Formatted capacity: 118 Mbytes
Average access: 15 ms
Track-track access: 4 ms
Data transfer rate: 7.5 Mbits/sec
Internal tape back-up drive, standard on 't' models
Tape capacity: 40 Mbytes
Average back-up speed: 1.5 Mbytes per min
Software functions: Back-up/Restore of all files
Back-up/Restore of selected files
Tape Status/Write servo on tape, format tape
Erase tape

Integrated Network System

On-board Ethernet interface
Controller: Intel single chip, with Direct Memory access
Connectors: Standard and thin wire Ethernet

Communication channel

Dual asynchronous/synchronous port, supported under MS-DOS, OS/2 and XENIX
Mouse port: Supports two button PS/2 compatible mouse (supplied with Qi Environment pack)

Keyboard

Type: Standard ATE, separate numeric keypad and cursor controls
Keys: 102
Function keys: 12
Repeat: Programmable 2-30 characters per sec
Type ahead buffer: 32 bytes (16 characters)
Coiled cable: 6 ft
Note: Any PS/2 compatible keyboard can be used with Qi

Power supply

Power: 145 watts max
Consumption: +5V, 18A - +12V, 4.2 A -12V, 0.3 A
Mains supply: 240 or 110V

Security

Hardware:
Security processor: Single chip custom microprocessor with ROM, RAM, Real Time Clock and battery back-up
Access device: Qi Card infra-red access device
Software: Contained within Qi Environment software pack

Software copy protection

Two programmable electronic key sockets: Internal to Qi hardware for use by application software developers for copy protection purposes

ROMBIOS

Developed in conjunction with Phoenix Technologies
C BIOS: Provides AT compatibility



A BIOS: Protected mode device drivers for OS/2, XENIX 386 and other protected mode operating systems

VGA BIOS: Programming interface to the Video Graphics hardware

Operating system software
MS-DOS 3.3 and GW BASIC

Optional Qi Environment software pack

User interface: Microsoft Windows/386 Presentation Manager, (Multitasking graphical interface, IBM SAA Conformant)

Mouse: PS/2 compatible two button mouse

Desktop communications (Windows PM communications software)

Terminal emulations: VT100, VT52, VT220, TTY and Viewdata

File transfer: X-Modem and Kermit

Telephone management: Automatic dialling
Number storage and recall
Call logging and monitoring

Network courier electronic mail: Windows PM based application (operates in conjunction with VX-Net)

Security Management software

Access control: Configuration set up for individual users or groups of users (max 99)
Timed access: Up to 8 time periods per user

Selective I/O device control to: Floppy drive (read and write)

Hard disk drive

Serial and parallel ports
MCA slots

Ethernet access

File encryption: Selective and unique to user or users (later release)

Audit trail: Records valid and invalid access attempts

Automatic suspend: Screen blanking and keyboard lockout for unattended periods

Dimensions and weight

System box

Height: 131mm
Length: 429mm
Width: 386mm
Weight: 7.5kg

Keyboard

Height: 40mm
Length: 205mm
Width: 488mm
Weight: 1.4kg

14" Colour monitor

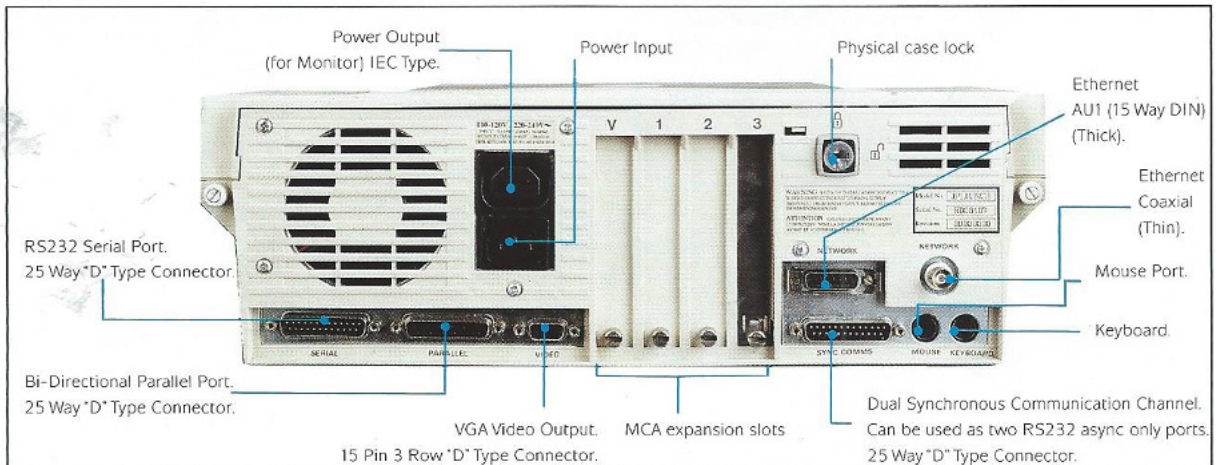
Height: 328mm
Length: 399mm
Width: 359mm
Weight: 13.1kg

14" Monochrome monitor

Height: 251mm
Length: 262mm
Width: 330mm
Weight: 7.5kg

Qi-Card

Height: 54mm
Length: 85mm
Width: 8mm



apricot

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Apricot reserve the right to alter specifications without prior notice.

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