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# APRICOT

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## XEN-S SERIES

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*The Apricot XEN-S Series of personal computers and workstations has been designed to bring 32-bit performance within the price range of conventional 286-based systems.*

*All XEN-S models feature full IBM AT-compatibility and use the Intel 386SX Microprocessor – a full 32-bit processor that has made the enhanced speed and multi-tasking capabilities of 386 architecture available at much lower cost than ever before.*



*The XEN-S Series is fully compatible with the IBM-AT standards, with a 3-slot AT-compatible expansion bus. The highly integrated, surface mounted motherboard incorporates Ethernet (except the XEN-S PC), mouse, serial and parallel ports, disk controllers and VGA graphics processor and RAM, leaving all three slots free for specialised expansion. XEN-S machines can be connected to other networks with the addition of a suitable AT LAN card.*

*The Series includes four basic models.*

*The XEN-S 200 has been designed as a secure, low-cost diskless Ethernet workstation.*

*The XEN-S 210 is also designed as a low-cost network workstation, and adds a 1.44 Mbyte floppy drive to the processing specification of the XEN-S 200.*

*The XEN-S 240x is designed for specialised personal workstation or file server applications. It includes a cartridge drive mass storage system, providing the equivalent of 44 Mbytes of removable fast-access hard disk storage.*

*The XEN-S 250, with 47 Mbytes of fast access hard disk storage, is ideal for the most demanding of standalone applications, or as a powerful workstation or network file server.*

## **PROCESSOR AND MEMORY**

*All XEN-S models are based in the Intel 386SX Microprocessor running at 16 MHz, giving sustained performance levels of up to 3 MIPS. Each machine includes 1 Mbyte of RAM as standard. Memory is expandable to 5 Mbytes on the main board, and up to a maximum of 16 Mbytes using 1-8 Mbyte expansion boards.*

*The 386SX Microprocessor is 100% object code compatible with the Intel 8088, 8086, 80286 and 80386 processors, and it will take full advantage of the 32-bit capabilities of 80386-specific software like Windows 386 or XENIX 386. An optional 80387SX numeric co-processor is also available, with full 80387 compatibility.*

*The XEN-S Series 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, OS/2 and Windows 386 systems.*





## ETHERNET

All XEN-S machines include integral Ethernet hardware, allowing each machine to be connected to a wide range of industry-standard Ethernet-based networks without any additional hardware. In addition, a ROM-based remote boot system for VX networks is built into every machine.

XEN-S includes built-in connectors for both thick and thin wire Ethernet cable, and the single chip controller provides high-speed Direct Memory Access between the Ethernet cable and the main system memory. With I/O controlled directly by the 386SX Microprocessor, this system provides a higher level of performance than many intelligent I/O boards.

## DISPLAY ELECTRONICS

IBM compatible VGA graphics processor and dedicated RAM are built in to the XEN-S motherboard as standard. VGA allows you to display a much wider range of colours and monochrome tones than previous graphics standards, with a standard graphics resolution of 640 x 480 and up to 256 colours. VGA is also fully compatible with previous display standards, allowing you to run any software developed for EGA, CGA, or MDA.

The XEN-S Series provides enhanced 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 VGA card.

There's a choice of high-resolution 14" VGA monitors in colour or monochrome with the standard XEN-S configuration. Each monitor is designed for comfortable, flicker-free display, with full tilt and swivel viewing control and an etched, anti-glare screen.

The monochrome display gives a clear, paper-white image with up to 64 shades of grey, while the colour monitor can display up to 256 colours from a palette of more than a quarter of a million colours.

## EXPANSION

All XEN-S models include a three slot AT-compatible expansion bus. And as the disk controller and colour VGA graphics are integrated onto the motherboard, all three slots on the XEN-S 200, 210 and 250 are free for further expansion.

With one slot reserved for the SCSI disk controller, the XEN-S 240x has two free slots.

Further expansion capacity can be added to any XEN-S model using the Apricot XPI expansion box - a compact, plug-in external unit which provides three additional full-size AT slots. A special interface for the XPI is built into each XEN-S machine, allowing the XPI to be fitted quickly and easily.

An external 5.25" floppy drive is also available - again without occupying an expansion slot.

## XEN-S ENVIRONMENT PACK

The optional XEN-S Environment software provides added functionality for the XEN-S range in three key areas - user interface, desktop communications and integrated network support.

At the heart of the XEN-S Environment is the Windows Presentation Manager user interface, complete with a suite of office applications - including a word processor, a graphics program, a diary and a filing system. Windows PM is a full multitasking environment for 386 systems, allowing users to run multiple Windows and MS-DOS applications simultaneously.

The XEN-S Environment also includes a two-button serial mouse for use with Windows and other mouse-driven applications. The mouse plugs into a dedicated mouse port, leaving the serial port free for other connections.

A range of terminal emulations - including VT52, 100, 220, TTY and Viewdata - support all Windows Cut/Paste and Dynamic Data Exchange (DDE) facilities, allowing on-line

COMPOSITE FX 24-AUG-1988 sterling rates from all contributors			
US \$	1.6805	-	1.6814
Dmk	-1854	-	3.1881
Yen	2250.4400	-	225.6400
Sw Fr	22.6856	-	2.6879
Fr Fr	10.8174	-	10.8291
Can \$	0.0678	-	2.0707
Aus \$	0.0648	-	3.0665
Lira	336400	-	2366.3000
Gldr	0.5967	-	3.6805
Sterling Index			75.9

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information to be linked directly on screen with WP or spreadsheet packages; X.Modem file transfer coupled with a comprehensive desktop telephone management utility; and an easy-to-use access applications interface for programmers. All communications are controlled easily and naturally through the Presentation Manager user interface.

The XEN-S Environment also provides full software support for the Integrated Network system built into the XEN-S models.

There's also a Windows-based Network Courier electronic mail system, which provides a full internal messaging system within VX-Net or VX LAN Manager networks.

Wide area and remote extensions are also available.

## MASS STORAGE OPTIONS

The XEN-S 210, 240x and 250 each include a 3.5", 1.44 Mbyte floppy disk drive. The XEN-S PC is equipped with an integral 32 Mbyte RLL disk drive, with an average access speed rated at 68 ms and the 250 provides 47 Mbytes of hard disk storage with an average access speed of 28 ms.

Coupled with an 8 Kbyte sector read-ahead buffer built into the drive itself, the cartridge subsystem gives a high performance average access time of 25 ms.

And the media cost is low – about two thirds the price of equivalent floppy disk storage.



The XEN-S 240x features a SCSI cartridge drive, with 44.4 Mbytes of disk storage housed on an exchangeable media cartridge. Read/write heads, drive electronics and stepper motors are all housed inside the computer: only the media itself is removable.

This system allows multiple media cartridges to be used – either for building up secure data archives, or for converting the XEN-S 240x to different applications environments. With all data storage physically removable from the disk, the exchangeable drive option also provides important security benefits.

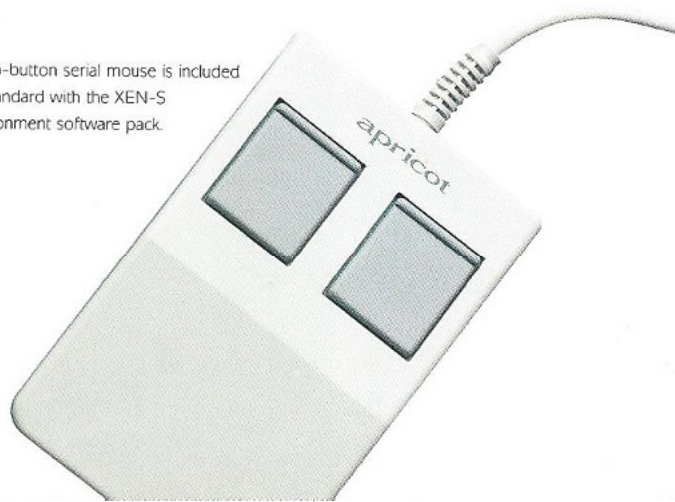
The cartridge drive SCSI controller card includes 32 Kbytes of high speed cache memory for increased disk performance.

## KEYBOARD

The XEN-S keyboard has been designed with a standard 102 key ATE layout, including 12 function keys and separate numeric and cursor pads. For special applications – such as 3274 terminal emulation – any AT-compatible keyboard can be used with XEN-S machines.

The XEN-S 240x provides 44 Mbytes of disk storage housed on an exchangeable media cartridge.

A two-button serial mouse is included as standard with the XEN-S Environment software pack.





# SPECIFICATIONS

## Processor

Type: Intel386SX, with instruction pipelining  
Clock frequency: 16MHz  
Numeric coprocessor: Optional Intel387SX maths coprocessor, clocked at 16MHz

## Motherboard integration

Surface mounted motherboard includes:  
386SX Microprocessor  
Memory from 1-5 Mbytes  
Three half-size AT expansion slots  
VGA display electronics processor and 256K RAM  
Floppy disk controller  
Mouse port  
Asynchronous serial port  
Parallel printer port  
PC/AT keyboard interface  
Ethernet network controller  
RLL hard disk controller (XEN-S 250 only)

## Expansion bus

Slots: Three half-size AT-compatible slots  
Three free on XEN-S 200, 210 and 250  
Two free on XEN-S 240x

## Memory

RAM: 1 Mbyte, operating at 0.7 wait states  
Above memory: Lotus/Intel/Microsoft Extended Memory Specification V 4.0  
Memory expansion: Up to 5 Mbytes via optional 4 Mbyte daughter board (0.7 wait states)  
Up to 16 Mbytes via AT bus  
Bad block mapping: Up to four 16K blocks containing defective RAM can be remapped to contiguous 64K memory segments

## Display

Architecture: IBM VGA, with on-board 16-bit processor and 256K RAM for enhanced performance  
Colour palette: 256,000  
Graphics 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 Mono EGA  
640 x 200 2 or 16  
320 x 200 256  
Text modes: (16 colours) 320 x 200, 640 x 200, 320 x 250, 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 70 Hz  
Vertical resolution: 480 lines (60Hz), 350 or 400 lines (70Hz)  
14" colour  
Standard: Analogue VGA  
Picture size: 240mm x 180mm  
Horizontal scan rate: 31.5 KHz  
Horizontal resolution: 640 or 720 dots  
Vertical scan rate: 60 or 70 Hz  
Vertical resolution: 480 lines (60Hz), 350 or 400 lines (70Hz)

## Mass storage

3.5" floppy disk drive (except XEN-S 200)  
Formatted capacity: 1.44 Mbyte  
47 Mbyte hard disk drive (XEN-S 250)  
Controller: RLL  
Formatted capacity: 47 Mbytes  
Average access: 28 ms  
Data transfer rate: 7.5 Mbits/sec  
44 Mbyte cartridge drive (XEN-S 240x)  
Controller: SCSI (occupies one expansion slot)  
Data cache: 32 Kbytes  
Removable cartridge: 44.4 Mbytes formatted capacity  
Average access: 25 ms  
Data transfer rate: 10 Mbits/sec  
Read ahead buffer: 8 Kbytes

## Keyboard

Keys: 102  
Function keys: 12  
Repeat: Programmable 2-30 characters/sec  
Type ahead buffer: 32 bytes (16 characters)  
Coiled cable: 6 ft

## Power supply

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



#### Inclusive software

MS-DOS 3.3 operating system  
GW BASIC  
ROMBIOS: C BIOS (provides full AT compatibility and Pre-boot password security)  
VGA BIOS

#### Optional XEN-S Environment software pack

User interfaces: Windows 386  
Presentation Manager multi-tasking environment  
Mouse: 2 button serial mouse

The following integrated Windows PM applications:  
Torus Tapestry 2\*

Network Courier electronic mail – for use with VX-NET server software

Terminal emulation – VT52, VT100, VT220 TTY, Viewdata

File transfer – X.Modem protocol

Telephone management: Automatic dialling

Number storage and recall system

Call logging and monitoring

#### Dimensions and weight

System box  
Height: 105mm  
Length: 380mm  
Width: 370mm  
Weight: 6.5kg

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

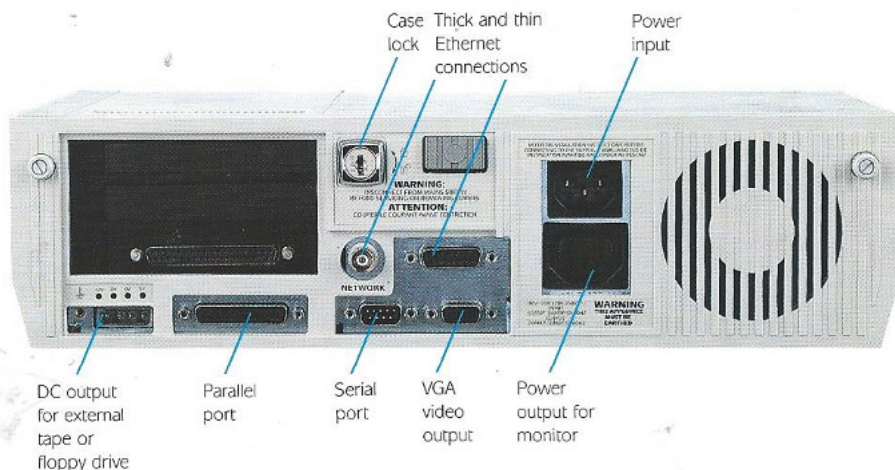
#### 14" Colour monitor

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

#### 14" Monochrome monitor

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

\*Not supported in all versions of XEN-S Environment.



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Apricot reserves the right to alter specifications without prior notice.

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