



## Overview

---

Apple Computer's implementation of X Window System<sup>®</sup>, Version 11, Release 4 for the AUX<sup>®</sup> operating system provides two distinct products: X11 and MacX<sup>®</sup>.

The first, X11, delivers a native X Window System environment that is well-suited for technical users and software developers. X11 provides a full development environment, including X programming libraries, the X Toolkit intrinsics, and the Athena Widget Set.

The second, MacX, allows X applications to share the AUX software Finder's desktop with Macintosh<sup>®</sup> and UNIX<sup>®</sup> applications. With MacX, users can open frequently-used X client applications by just choosing a command from a Macintosh pull-down menu.

Both X11 and MacX allow users to take advantage of the highly portable, network-transparent X Window System.

The X Window System is the result of years of development work by researchers from the computer industry and from the Massachusetts Institute of Technology (MIT).

Apple Computer's X Window System for AUX complies with the standards and conventions set by the MIT X Consortium.

# Features

# Benefits

---

## X11 for A/UX

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>· XWindowSystem, Version 11, Release 4 server</li></ul>   | <ul style="list-style-type: none"><li>· Optimizes graphics performance and memory usage</li></ul>   |
| <ul style="list-style-type: none"><li>· Native XWindowSystem user environment</li></ul>   | <ul style="list-style-type: none"><li>· Provides XWindowSystem environment suitable for displaying client application running on other hardware platforms</li></ul>   |
| <ul style="list-style-type: none"><li>· Complete X11 Release 4 development tools</li></ul>  | <ul style="list-style-type: none"><li>· Allow users to develop X applications using the Xlib library and the Xtk Toolkit</li></ul>  |
| <ul style="list-style-type: none"><li>· Sample widget set</li></ul>   | <ul style="list-style-type: none"><li>· Includes MIT Athena Widget Set, suitable for customization</li></ul>  |
| <ul style="list-style-type: none"><li>· XWindowSystem, Version 11, Release 4 client applications</li></ul>                                  | <ul style="list-style-type: none"><li>· Provides desktop client applications, such as o'clock and xcalc; utilities, such as xterm (X terminal emulator); and development tools</li></ul>  |
| <ul style="list-style-type: none"><li>· Support for 1-bit black-and-white display, and 256-color display with an 8-bit video card</li></ul> | <ul style="list-style-type: none"><li>· Permits display of X client applications on any monitor connected to an A/UX system</li></ul>   |
| <ul style="list-style-type: none"><li>· Support for multiple-screen display</li></ul>   | <ul style="list-style-type: none"><li>· Lets users display an X client application on any monitor connected to an A/UX system</li></ul>   |
| <ul style="list-style-type: none"><li>· User and reference manuals</li></ul>  | <ul style="list-style-type: none"><li>· Provide documentation on using Apple Computer's XWindowSystem for A/UX</li><li>· Provide reference pages that describe X11 commands, client applications, and programming libraries</li></ul> |

---

## MacX for A/UX

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>· A/UX Finder integration</li></ul> | <ul style="list-style-type: none"><li>· Lets users run X client applications, Macintosh productivity applications, and UNIX applications concurrently on A/UX</li></ul> |
|---|---|

# Product Details

---

## X11 for A/UX

### Environment

- X11 for A/UX offers the native X Window System environment with the improved performance of the X Window System, Version 11, Release 4 server. X11 controls the display and does not allow access to the A/UX Finder.

### Network transparency

- X11 client applications can reside on any system on the network—on a local computer or a remote host computer. The applications can also be displayed on a local or remote system.

### X libraries and applications

- Standard libraries, standard include files, applications, and utilities are provided for X client application development. These include libX11, libXau, libXaw, libXdmcpr, libXext, libXinput, libXmu, libXt, and libboldX.
- X11 display font families include Charter, Clean, Courier, Helvetica®, Lucida, New Century Schoolbook, Symbol, and Times®.

### Screen options

- X11 supports both monochrome and 8-bit color video cards and displays. The 8-bit color option allows simultaneous display of up to 256 colors or shades of gray from a palette of 16 million colors.

### Documentation

- X11 documentation includes X11 User's Guide for A/UX, which describes how to use X11; and two reference guides, X11 Command Reference for A/UX and X11 Programmer's Reference for A/UX, which describe command usage and the programming libraries.

---

## MacX for A/UX

### Environment

- MacX allows X client applications to share the A/UX Finder with multiple Macintosh and UNIX applications. MacX is appropriate for novice and experienced users alike.

### Documentation

- MacX documentation includes MacX User's Guide, which describes how to use MacX features.
- MacX for A/UX Supplement describes how to use the MacX server in the A/UX Finder environment.

---

### Required equipment

To use the X Window System for A/UX, you'll need the following:

- Macintosh IIx, Macintosh IIci, Macintosh IIx, Macintosh IIcx, Macintosh IIsi, or Macintosh SE/30 personal computer; or Macintosh II with PMMU

- At least 4 megabytes of RAM (5 megabytes recommended)
- Apple 80-megabyte (or larger) hard disk or the equivalent (160 megabytes recommended)
- A/UX operating system Version 2.0, A/UX Version 2.0.1, or later versions

### Optional equipment

- Optional: an Apple® EtherTalk® NB Card for the Macintosh II family of computers, or an equivalent Ethernet card for the Macintosh SE/30 (the use of Ethernet is recommended)



# X Window System 2.1 for AUX

## Technical Specifications

### X11 for A/UX

#### Environment

- Network transparency
- Color support
- Support for "backing store" and "save under" features that dramatically improve window system performance

#### Window manager

- User control of screen configuration and customization

- Ability to manage multiple screens (using twm) from a single window manager process

#### Client applications

- All client applications are based on X11 Release 4
- Terminal emulator with DEC's VT102's and Tektronix 4014 compatibility (xterm)
- Mouse-based screen editor (xedit)
- Manual page browser (xman)

- Bitmapped image manipulation utilities, including conversion from screen image to PostScript® format (bitmap, xdpr, xwd, xwud, xpr)
- Widget browser (viewres)
- Font display (xfd)

#### Libraries

- Full application development toolkit (X Toolkit intrinsics and Xaw Athena Widget Set)
- Graphics library (Xlib)
- Include files

### MacX for A/UX

#### Environment

- Network transparency
- Integrated with the A/UX Finder

- Color support
- Full international character set support
- Window Manager

- User control of screen configuration and customization

## Ordering Information

X Window System 2.1 for A/UX  
Order No. M0411LL/B

With your order, you'll receive X Window System 2.1 for A/UX software:  
-15 installation disks for X11  
-6 installation disks for MacX

-X Window System 2.1 for A/UX documentation, which includes

- Getting Started with X Window System for A/UX
- MacX User's Guide
- MacX for A/UX Supplement
- X11 User's Guide for A/UX
- X11 Command Reference for A/UX
- X11 Programmer's Reference for A/UX

X Window System Site License      Order No. M0747LL/B

X Window System 2.1 for A/UX Right to Copy      Order No. M0749LL/B

X Window System 2.1 for A/UX Manual Set      Order No. M0748LL/B

For the name of your nearest authorized Apple A/UX and X Window System dealer, call 800-538-9696.