Software Product Description

PRODUCT NAME: DECwindows Motif® Version 1.2-3 for OpenVMS **SPD 42.19.02**

This Software Product Description describes the following two products:

- DECwindows Motif® Version 1.2-3 for OpenVMS VAX
- DECwindows Motif® Version 1.2-3 for OpenVMS Alpha

The general description section describes features common to both products. Any differences in product features are indicated in separate sections that follow.

DESCRIPTION

The DECwindows desktop environment provides a graphical user interface to the OpenVMS VAX and OpenVMS Alpha operating systems. DECwindows incorporates the OSF/Motif user interface as the design center for DECwindows applications. OSF/Motif is a graphical user interface widely acknowledged as the industry standard. This interface allows users to interact with the OpenVMS VAX and OpenVMS Alpha operating systems using a point-and-click technique. DECwindows includes a set of integrated desktop applications that demonstrate the ease-of-use of this user interface and provides OpenVMS Alpha users with a base set of desktop tools.

DECwindows Motif Version 1.2-3 for OpenVMS supports both the DECwindows XUI and the Motif Window Manager. Although the Motif Window Manager is the default window manager, users can switch easily to the XUI Window Manager. The DECwindows desktop productivity applications have been converted to use Motif, but they also work with the XUI Window Manager. The DECwindows Motif Version 1.2-3 for OpenVMS layered products also contain run-time support for the XUI, OSF/Motif Release 1.1.3, Release 1.2.2, and Release 1.2.3 Toolkits. This means that users can run XUI and Motif applications, including native applications and, on OpenVMS Alpha systems, translated applications. (See the *Translated Image Environment* section of this SPD for more information about running translated applications.)

DECwindows Motif Version 1.2-3 for OpenVMS is based on the X Consortium's specification for the X Window System™, Version 11, Release 5 (X11R5) and OSF/Motif Release 1.2.3.* X Window System standards supported as part of DECwindows Motif include the X11 network protocol, a base set of workstation fonts, the C language binding for the Xlib programming library, and the C language binding for the X Toolkit library.

Support of the X11 network protocol in the client library and display server components provides the OpenVMS VAX and OpenVMS Alpha operating systems with the ability to interoperate with other X11-compliant systems in a distributed fashion.

DECwindows supports the client/server distribution inherent in the X Window System. This client/server model provides for running X Window clients on one node and displaying output to another node, using a transport to communicate between the nodes. The DECwindows Motif Version 1.2-3 for OpenVMS product provides four transport interfaces: local shared memory, DECnet, TCP/IP (using Digital's TCP/IP Services for OpenVMS product or other third-party products such as MultiNet and Wollongong), and LAT. Users can also provide their own transport subsystems and transport interfaces.

To determine whether a separately orderable DECwindows Motif based layered product or X application runs on or can communicate with DECwindows Motif for OpenVMS VAX or OpenVMS Alpha systems, consult the application's Software Product Description.

The DECwindows Motif for OpenVMS user environment consists of four basic components:

1. Session Manager

   Session Manager provides the top-level user interface to a DECwindows workstation. From Session Manager, users can start applications, customize their session, and perform security management.

* Software supplied by the Open Software Foundation (OSF) may not be upward compatible with future DECwindows releases.

Session Manager also lets users specify the language user interface for supported DECwindows applications if they have ordered, installed, and are licensed to use the appropriate DECwindows Motif for OpenVMS language variant kit(s). For the supported language variants, refer to the DECwindows Motif OpenVMS User Interface Product SPD.

For more information about which DECwindows Motif desktop applications have translated user interfaces, refer to the Software Product Description (SPD) for that language variant. The DECwindows Motif language variant SPDs also contain information on specific local hardware and software support provided in the language variant kits.

2. Window Manager

The Window Manager lets users control the size and placement of windows. The OSF/Motif Window Manager is provided as the default window manager; users can choose instead to work with the DECwindows XUI Window Manager. The window manager can be chosen by an individual user or by a system manager for an entire system.

3. FileView

FileView, a graphical interface to the OpenVMS file system, allows users to navigate the file system and to perform operations on files.

4. DECterm Terminal Emulator

The DECterm terminal emulator provides workstation users with a traditional character-cell interface for existing OpenVMS features and applications. It is a VT320 terminal emulator. It supports ReGIS and sixel, but is not fully VT340 compatible. Programs written for VT52-, VT100-, VT220-, or VT320-class terminals and using OpenVMS terminal driver features operate without modification in this workstation window. DECterm also provides workstation-oriented features, such as mouse-based cursor positioning, variable screen sizes, and cutting and pasting of text between DECterm and other DECwindows applications. Many programs can also use these features without modification.

Desktop Productivity Applications

DECwindows Motif for OpenVMS provides a set of integrated desktop applications that employ a common look and feel to help users easily master their computing environment.

The following desktop applications are available in DECwindows Motif Version 1.2-3 for OpenVMS:

- Bookreader — A tool for viewing the contents of books that are distributed and stored on line.
- Calculator — A basic scientific calculator.
- Calendar — A personal time-management system.
- Cardfiler — A desktop card index or flip file similar to an online address and/or phone book.
- Clock — An analog and/or digital clock with an alarm.
- CDA Viewer — A tool for reading documents containing compound text (including Display PostScript text), graphics, and image data on DECwindows workstations. Using CDA Viewer, DECwindows workstation users can view a processed Display PostScript file that looks the same as output from any of Digital's PostScript printers. You can view Display PostScript output with the CDA Viewer and DECwindows Mail.
- Computer-Based Instruction — An online tutorial for novice Motif users; users can learn how to use the mouse and perform other simple operations with Motif.
- DECsound — An easy-to-use application that lets you play recorded messages, record audio messages, mail recorded messages, and include recorded audio messages in compound documents.

Note that DECsound is available for use on these TURBOchannel systems only:

  - DEC 3000 Model 400 series
  - DEC 3000 Model 500 series
  - DEC 3000 Model 700 series
  - DEC 3000 Model 900 series
  - VAXstation 4000 Models VLC, 60, and 90

- Mail — A DECwindows user interface to the OpenVMS Mail facility.
- Message Window — A window that displays system messages, such as new mail notification or system manager messages.
- Notepad — A simple text editor.
- Paint — A simple bitmap graphics editor.
- Print Screen — A tool for capturing images on the screen; images can be printed directly or saved to a file.
- Puzzle — A game of numbered puzzle tiles.

The DECW$EXAMPLES directory in the DECwindows Motif for OpenVMS product supplies several audio images (such as animal sounds, laughter, and various alarm tones) that can be played back using DECsound on VAXstation 4000 series and DEC 3000 series workstations. The CDA Viewer can be used to view documents that contain audio images. In addition, DECwindows Mail can be configured to include the audio editor for sending and receiving voice mail messages. On OpenVMS VAX systems, ALL–IN–1 MAIL can be configured to include the audio editor for sending and receiving voice mail messages.

NCSA Mosaic Browser

DECwindows Motif Version 1.2-3 for OpenVMS includes the National Center for Supercomputer Applications (NCSA) implementation of Mosaic. Mosaic is a World Wide Web browser that lets you navigate and access information on the Internet. With Mosaic, you can search, retrieve, display, store, and forward data using the Internet. Mosaic functions in conjunction with the World Wide Web environment, which is a collection of information servers.

The NCSA Mosaic viewer is installed with the DECwindows Motif Version 1.2-3 for OpenVMS systems product installation. The NCSA Mosaic viewer software is provided without charge as sample software, on an "AS IS" basis, to introduce you to the Internet and help you get started using a World Wide Web viewer. Because the NCSA Mosaic viewer that ships with this release is only a sample implementation, we have placed Mosaic with the other sample software in the DECW$UTILS directory; it is not a part of the DECwindows Motif product and Digital assumes no liability for its use. We plan to replace this sample NCSA Mosaic viewer implementation in a future release.

To access the Internet with Mosaic, you must install DEC TCP/IP Services for OpenVMS. If DEC TCP/IP Services for OpenVMS is not installed, you can display the DECwindows Motif for OpenVMS Home Page, but you cannot access topics on other http (Internet) servers.

Support for MIT Utility Programs

Several MIT Utility programs, bitmaps, and the Miscellaneous Utilities Library from the MIT X11 Release 4 and 5 distribution are included in the DECW$UTILS directory of the DECwindows Motif for OpenVMS layered products. The sources and images for a subset of these MIT utilities are included. The XPR (X Print) utility, which allows users to capture and print the contents of windows, is new with the DECwindows Motif Version 1.2-3 for OpenVMS Alpha release. A complete list of available MIT programs is included in the *DECwindows Motif Version 1.2-3 for OpenVMS Release Notes*.

The DECwindows Motif for OpenVMS Help System

The DECwindows Motif Help system uses the familiar Bookreader interface to display Help and to retrieve Help information. This Help system includes a Table of Contents and cross-referencing through the use of hotspots.

The DECwindows desktop applications use the DECwindows Motif Help system. When invoking Help, either from a Help menu or from context-sensitive Help, Bookreader is started and a Help topic is displayed.

Local Language Support

DECwindows Motif is available in many local languages. Please contact your local Digital office for the latest information on availability of options and supported multilingual configurations. For more details on the language variants, refer to the specific language variant SPDs. Refer also to the *ORDERING INFORMATION* and *SOFTWARE LICENSING* sections of this SPD.

Programming Support

The DECwindows Motif for OpenVMS environment includes an extensive set of programming libraries and tools for use by application developers. The libraries are provided in the form of shareable images. While OSF/Motif Release 1.2.3 programming support is provided, OSF/Motif Release 1.1.3, Release 1.2.2, and XUI programming support are not.

There are three categories of libraries provided:

- Standard X Window System libraries, such as Xlib and the Intrinsics (X Toolkit)
- OSF/Motif Release 1.2.3 Toolkit support for developing applications using the Motif user interface style
- Digital added-value libraries that give users additional capabilities:
  - Digital's Extensions to OSF/Motif (DXm)
  - CDA support
  - Display PostScript support (XDPS)
  - Porting tools for changing applications from the XUI interface to the OSF/Motif user interface

Components from each of these areas can be used in any combination to address the needs of applications. These components can also use the tools from a variety of different programming languages.

Motif language bindings are provided for the following programming languages:

- DEC Fortran for OpenVMS VAX and OpenVMS Alpha
- DEC Pascal for OpenVMS VAX and OpenVMS Alpha
- DEC C for OpenVMS VAX and OpenVMS Alpha

In addition, C header files supplied by the OSF have been modified to work with DEC C++. Pascal and Fortran bindings are included in the DECwindows Motif kit; OSF/Motif ''strongly typed'' language bindings for Ada are available in the DEC Ada for OpenVMS (VAX and Alpha) layered product.

For additional programming support, the DECW$EXAMPLES directory includes the following updated programming examples:

- OSF/Motif Release 1.2.3 examples (Motif widget set examples)
- X11R4 and X11R5 programming examples (Xlib examples)
- Digital-supplied examples

Programming Support Libraries

The following sections describe the programming support libraries.

X Window System (X) Programming Support

The X Window System compatible X programming library (Xlib) provided by DECwindows Motif for OpenVMS supplies basic resource management (windows, color maps, input devices) and bitmap graphics services. It defines a mapping of the X network protocol to a procedure library.

X Window System Intrinsics Support

The X Window System Intrinsics library support contains the X Consortium Release 5 (R5) Intrinsics (X Toolkit). The X Toolkit provides low-level routines allowing the creation of user interface objects called widgets.

OSF/Motif User Interface Programming Support

OSF/Motif is the user interface for Digital and third-party software tailored for the DECwindows environment. It establishes the conventions and styles for graphical applications. Applications use Motif components to build user interfaces that look and feel alike.

The *OSF/Motif Style Guide* describes the principles, philosophy, and components used to build consistent and well-integrated OSF/Motif applications. In addition, the *DECwindows Companion to the OSF/Motif Style Guide* provides additional information concerning the style of OSF/Motif user interfaces. This style guide companion also provides guidelines concerning additional features that Digital provides in the DECwindows Motif for OpenVMS offering, and includes a Digital preferred terminology list for a number of supported languages for developers producing OSF/Motif applications in these languages.

The OSF/Motif style concepts are implemented by the OSF/Motif Toolkit. DECwindows Motif contains both the OSF/Motif and XUI Toolkits; application run-time support is provided for the OSF/Motif Release 1.2.3, Release 1.2.2 and Release 1.1.3 (as well as for the XUI) Toolkits. The OSF/Motif Toolkit is based on the X Toolkit Intrinsics and contains three components:

- OSF/Motif widgets and gadgets for implementing common user interface objects, such as scroll bars, menus, and push buttons
- Utility routines that provide applications with functions for performing common tasks, such as cut and paste
- Resource manager routines for loading user interface definition files and creating widgets and gadgets based on the contents of the definition files

The OSF/Motif Toolkit is used in conjunction with the OSF/Motif User Interface Language (UIL) compiler. The user interface definition files produced by this compiler contain the data that describes the form of DECwindows applications. These UIL files also allow OSF/Motif Toolkit widget and gadget information, such as menu item labels, to be stored separately from the toolkit and application run-time code. This capability allows application developers to prototype and easily modify user interface designs, to separate form from function in applications, and to support translatable products that do not require recompilation of source files.

Digital's Extensions to OSF/Motif

The DECwindows Motif product adds value to the standard OSF/Motif Toolkit by including a library that contains a set of Digital-developed widgets and run-time routines not available from OSF. The following widgets provide a common DECwindows interface for some commonly used DECwindows functions:

- A Color Mix widget that enables users to select and mix colors using a variety of color models.
- A Compound String Text widget that provides support for international right-to-left character sets as well as left-to-right character sets.
- A Help widget that allows applications to display appropriate Help text in a consistent manner. This widget is provided for backward compatibility with OpenVMS DECwindows Motif Version 1.0 and has been superseded by the DECwindows Motif for OpenVMS Help system (hyperhelp).
- A Print widget that allows applications to print files in a consistent manner.
- A Structured Visual Navigation (SVN) widget used by applications to display hierarchical information.

The run-time routines include:

- Three DECwindows Motif for OpenVMS Help system calls that enable users to display online help files using Bookreader.
- DECimage run-time support for applications developed using DECimage Application Services. This support includes the Image Services Library, Image Display Services, and X Image Extensions.

Translated Image Environment for DECwindows Motif for OpenVMS Alpha

DECwindows Motif for OpenVMS Alpha provides an array of services to allow the operation of programs that have undergone binary translation from DECwindows Motif Version 1.1 or XUI VAX images. These programs can perform virtually all user-mode functions on DECwindows Motif for OpenVMS Alpha systems. However, DECwindows Motif for OpenVMS Alpha shareable images that are used with translated images are different from and incompatible with the shareable images used for native images. Native and translated images that use DECwindows Motif for OpenVMS Alpha software cannot be used together in a process.

Without requiring special source code, the Translated Image Environment automatically resolves differences between the VAX and Alpha architectures, including floating-point registers, condition codes, exception handling, ASTs, and others.

The Translated Image Environment included with DECwindows Motif for OpenVMS Alpha is sufficient to run images that have been translated elsewhere. The DECmigrate layered product can be used to translate images linked with the OSF/Motif Release 1.1.3 Toolkit (shipped in DECwindows Motif Version 1.1 for OpenVMS VAX) for running on an OpenVMS Alpha system. For additional information on the precise characteristics of programs suitable for binary translation, refer to the DECmigrate Software Product Description (SPD 39.44.xx).

XUI to Motif Porting Tools

Digital provides porting tools to aid programmers in porting applications to Motif. These tools replace occurrences of XUI names in the input source file with the correct Motif names.

CDA Programming Support

The CDA Toolkit provides access routines that applications can use to create, read, and write files containing compound text, graphics, and imaging data. These files provide a vehicle for recording this information on disk, a medium for interchange of this data between applications, and an intermediate form from which high-resolution printable graphics data can be generated.

Enhanced X Windows Display PostScript (XDPS)

The Display PostScript System provided with DECwindows Motif for OpenVMS extends the native X graphical programming environment for DECwindows users displaying text or images on workstations that support the XDPS extension.

X Display PostScript adds the following capabilities to the basic X11 environment:

- Most DECwindows fonts can be displayed at any size and rotation angle.
- XDPS graphics are specified in a user-defined coordinate system independent of monitor density.
- Color or gray-scale rendition is automatically modified to take advantage of the monitor type through either direct display, color dithering, or half toning.
- DPS Display routines can be downloaded to the server and executed on command.
- Sophisticated graphics primitives, such as precisely controlled Bezier curves, can be displayed.
- Any display can be scaled and rotated arbitrarily.

Programming access to XDPS is through the Adobe Client Library. In addition, a converter called pswrap allows users to convert PostScript code into C programs that can be called from other languages.

DECwindows X11 Display Server for OpenVMS Extension Support

The X11 server protocol is implemented on both the OpenVMS VAX and the OpenVMS Alpha operating systems. As of OpenVMS VAX Version 6.0, the DECwindows X11 display server on OpenVMS VAX supports the full X11 protocol and contains significant portions of the Release 4 (R4) and Release 5 (R5) code base, plus some optional extensions. By contrast, the DECwindows X11 display server for OpenVMS Alpha is a direct port of the X Window System Version 11, Release 5 (X11R5) display server, plus some optional extensions.

The DECwindows X11 display server is an optional part of the OpenVMS VAX and OpenVMS Alpha kits. The DECwindows X11 display server, including device drivers and fonts, can be selected for installation during the OpenVMS VAX and OpenVMS Alpha installation procedures.

The DECwindows X11 display server for OpenVMS supports the following extensions. Client libraries for these extensions are included in the DECwindows Motif for OpenVMS VAX and DECwindows Motif for OpenVMS Alpha layered products.

- AccessX (OpenVMS Alpha only): "AccessX" as defined by Digital. Provides keyboard enhancements to the X Server for people with movement impairments.

- Display PostScript: "Adobe-DPS-Extension" as defined jointly by Adobe Systems Incorporated and Digital Equipment Corporation and registered with the X Consortium. Allows the display server to execute PostScript commands to support the XDPS programming environment.
- MITmisc: "MIT-SUNDRY-NONSTANDARD" as defined by the X Consortium. Allows users to determine and to set the server bug compatibility mode.
- MIT-SHM (OpenVMS Alpha only): "MIT-SHM" as defined by the X Consortium. Provides the ability to share memory XImages between the client and server.
- Multibuffering: "Multi-Buffering" as defined by the X Consortium. Allows the display server to provide support for multiple-buffered images.
- Shape (OpenVMS Alpha only): "SHAPE" as defined by the X Consortium. Allows programs to create windows with shapes other than the standard rectangle.
- X Imaging Extension: "XIE" as defined by Digital and registered with the X Consortium. Allows the display server to provide hardware or software support for imaging operations for ISL, the Image Services Library.
- XTRAP: "DEC-XTRAP" as defined by Digital and registered with the X Consortium. Allows the display server to provide support for hands-off testing programs like DTM, the DEC Test Manager.

HARDWARE REQUIREMENTS

DECwindows Motif runs on any of the supported processors, but requires either a workstation, a DOS-based PC, a Macintosh or an X terminal for display. These display devices must be running an X Window System, Version 11, Release 4 (R4) or Release 5 (R5) compliant display server.

Alpha Processors Supported

Alpha:
AlphaStation Model 200
AlphaStation Model 400
AlphaStation Model 600
AlphaServer Model 100
AlphaServer Model 200
AlphaServer Model 210

DEC 2000 Model 300 Workstation
DEC 2000 Model 300 Server
DEC 3000 Model 300 Workstation
DEC 3000 Model 300 Server
DEC 3000 Model 400 Workstation
DEC 3000 Model 400 Server
DEC 3000 Model 500 Workstation
DEC 3000 Model 500 Server
DEC 3000 Model 600 Workstation
DEC 3000 Model 600 Server
DEC 3000 Model 800 Workstation
DEC 3000 Model 900 Workstation

DEC 4000 Model 610 System

DEC 7000 Model 610 System

DEC 10000 Model 610 System
DEC 10000 Model 710 System

VAX Processors Supported

VAXft:
VAXft Model 110
VAXft Model 310
VAXft Model 410
VAXft Model 610
VAXft Model 612

VAX:
VAX 4000 Model 100
VAX 4000 Model 200
VAX 4000 Model 300
VAX 4000 Model 400
VAX 4000 Model 500
VAX 4000 Model 600

VAX 6000 Model 200 Series
VAX 6000 Model 300 Series
VAX 6000 Model 400 Series
VAX 6000 Model 500 Series
VAX 6000 Model 600 Series

VAX 7000 Model 600 Series

VAX 8200, VAX 8250, VAX 8300
VAX 8350, VAX 8500, VAX 8530
VAX 8550, VAX 8600, VAX 8650
VAX 8700, VAX 8800, VAX 8810
VAX 8820, VAX 8830, VAX 8840
VAX 9000 Model 110
VAX 9000 Model 210
VAX 9000 Model 300 Series
VAX 9000 Model 400 Series

VAX 10000 Model 600 Series

VAX–11/750

MicroVAX:
MicroVAX 3100 Model 10/10E
MicroVAX 3100 Model 20/20E
MicroVAX 3100 Model 30
MicroVAX 3100 Model 40
MicroVAX 3100 Model 80
MicroVAX 3100 Model 90
MicroVAX 3300, MicroVAX 3400
MicroVAX 3500, MicroVAX 3600
MicroVAX 3800, MicroVAX 3900

VAXstation:	VAXstation 3100 Model 30
	VAXstation 3100 Model 38
	VAXstation 3100 Model 40
	VAXstation 3100 Model 48
	VAXstation 3100 Model 76
	VAXstation 3200, VAXstation 3500
	VAXstation 3520, VAXstation 3540
	VAXstation 4000 Model 60
	VAXstation 4000 Model 90
	VAXstation 4000 VLC
VAXserver:	VAXserver 3100, VAXserver 3300
	VAXserver 3400, VAXserver 3500
	VAXserver 3600, VAXserver 3602
	VAXserver 3800, VAXserver 3900
	VAXserver 4000 Model 200
	VAXserver 4000 Model 300
	VAXserver 4000 Model 500
	VAXserver 6000 Model 210
	VAXserver 6000 Model 220
	VAXserver 6000 Model 310
	VAXserver 6000 Model 320
	VAXserver 6000 Model 410
	VAXserver 6000 Model 420
	VAXserver 6000 Model 510
	VAXserver 6000 Model 520
	VAXserver 6000 Model 610
	VAXserver 6000 Model 620
	VAXserver 6000 Model 630

Processors Not Supported

For performance reasons, DECwindows Motif Version 1.2-3 for OpenVMS VAX is not supported on the following processors:

MicroVAX II, MicroVAX 2000, VAXstation II, VAXstation 2000, VAX–11/725, VAX–11/782, VAXstation 8000, VAX–11/730, VAX–11/780, VAX–11/785, VAX 11/750

Disk Space Requirements (Block Cluster Size = 1)

For Alpha Systems

Disk space required for DECwindows Motif installation:	131,000 blocks
Disk space required for DECwindows Motif use (permanent):	125,000 blocks

To support full OpenVMS Alpha and full DECwindows Motif for OpenVMS Alpha, a system disk with at least 380 MB is recommended. However, a subset of the DECwindows Motif environment can be installed. Installation of DECwindows Motif Version 1.2-3 for OpenVMS Alpha gives the user the option to install any or all of the following components:

- DECwindows Motif User Environment and Applications (base kit) — 69,000 blocks. This section provides support for running DECwindows Motif for OpenVMS Alpha applications on Alpha compute servers.
- DECwindows Motif Programming Support — 12,500 blocks. This number includes support for all the programming languages. If only a subset of languages is installed, the amount of disk space will be less.
- DECwindows Motif Programming Examples — 13,000 blocks.
- Translated Image Support — 33,500 blocks.

For VAX Systems

Disk space required for DECwindows Motif installation:	71,5000 blocks
Disk space required for DECwindows Motif use (permanent):	65,000 blocks

To support full OpenVMS VAX and full DECwindows Motif for OpenVMS VAX, a system disk with at least 175 MB is recommended. However, a subset of the DECwindows Motif environment can be installed. Installation of DECwindows Motif Version 1.2-3 for OpenVMS VAX gives the user the option to install any or all of the following components:

- DECwindows Motif User Environment and Applications (base kit) — 45,000 blocks. This section provides support for running DECwindows Motif for OpenVMS VAX applications on VAX compute servers.
- DECwindows Motif Programming Support — 12,000 blocks. This number includes support for all the programming languages. If only a subset of languages is installed, the amount of disk space will be less.
- DECwindows Motif Programming Examples — 11,500 blocks.

These counts refer to the disk space required on the system disk. The sizes are approximate; actual sizes may vary depending on the user's system environment, configuration, and software options (for example, DECwindows Motif programming examples).

Memory Requirements for OpenVMS Alpha Systems

The minimum amount of memory required for a system user to install, boot, and log in to an OpenVMS Alpha system running DECwindows Motif for OpenVMS Alpha is 32 MB. Remote execution of applications requires an additional system that runs the application while the application is displayed on the local workstation.

The performance and memory usage of OpenVMS Alpha systems running DECwindows Motif for OpenVMS Alpha depend on system configuration and window and applications usage.

Memory Requirements for OpenVMS VAX Systems

The minimum amount of memory required for a system user to install, boot, and log in to an OpenVMS VAX system running DECwindows Motif for OpenVMS VAX is 12 MB; 16 MB is highly recommended for more robust performance. Remote execution of applications requires an additional system that runs the application while the application is displayed on the local workstation.

The performance and memory usage of OpenVMS VAX systems running DECwindows Motif for OpenVMS VAX depend on system configuration and window and applications usage.

Supported Multiscreen Configurations

DECwindows Motif supports workstations with multiple screens. On the Alpha operating system, a multiscreen configuration consists of a single DEC 2000 or DEC 3000 series workstation that supports multiple graphics options. A graphics option consists of a graphics controller and a monitor.

The DEC 3000 Model 400 workstation supports up to three monitors. The DEC 3000 Model 500 workstation supports up to six monitors (integral graphics plus five HX options). The HX is a TURBOchannel-based, 2D accelerated graphics option that supports 66 or 72 Hz monitors with 1280 x 1024 screen addressing.

See the *Systems and Options Catalog* for more information.

Miscellaneous Supported Peripherals

VSXXX-AB	Tablet (replaces mouse)
VSXXX-JA	Audio headset
VSXXX-AA	Mouse
VSXXX-FA	Mouse

CLUSTER ENVIRONMENT

This product is fully supported without restrictions when installed on any valid and licensed VAXcluster* configuration.

* VAXcluster configurations are fully described in the VAXcluster Software Product Description (29.78.xx) and include CI, Ethernet, and mixed-interconnect configurations.

SOFTWARE REQUIREMENTS

DECwindows Motif Version 1.2-3 for OpenVMS is supported on the following operating systems:

- OpenVMS VAX Version 5.5-2, Version 6.0, and Version 6.1
- OpenVMS Alpha Version 1.5 and Version 6.1

OPTIONAL SOFTWARE

- PATHWORKS for DOS and Windows
- PATHWORKS for DOS (TCP/IP)
- PATHWORKS for Macintosh
- DEC TCP/IP Services for OpenVMS VAX
- DEC TCP/IP Services for OpenVMS Alpha
- Builder eXcessory (BX) for OpenVMS VAX

GROWTH CONSIDERATIONS

The minimum hardware/software requirements for any future version of this product may be different from the requirements for the current version.

DISTRIBUTION MEDIA

CD–ROM (VAX and Alpha), TK50 streaming tape (VAX), 9-track 1600-bpi magnetic tape (VAX)

ORDERING INFORMATION

For OpenVMS Alpha Systems

The DECwindows Motif for OpenVMS Alpha product is available as a standalone layered product on CD–ROM; in addition, users of multiple OpenVMS Alpha layered products can obtain DECwindows Motif binaries and online documentation in Bookreader format as part of the Software Library for OpenVMS Alpha Layered Products CD–ROM.

Software Licenses:
Personal Use: QL-XA1A*-2B
Unlimited Use: QL-MV4A*-AA

Software Media:
Motif Alpha media and Bookreader (user and programming) documentation: QA-MV4AB-H8
CD–ROM Software Library for OpenVMS Alpha Layered Products (binaries and Bookreader documentation): QA-03XAA-H8

Documentation:
Hardcopy Motif User Documentation (VAX and Alpha): QA-XA1AA-GZ
Hardcopy Motif Programming Documentation (VAX and Alpha): QA-XA1AB-GZ

Software Product Services:
DECwindows Motif Personal Use (VAX and Alpha): QT-XA1**-**
DECwindows Motif Unlimited Use (Alpha only): QT-MV4**-**

For OpenVMS VAX Systems

The DECwindows Motif for OpenVMS VAX product is available as a standalone layered product on CD–ROM; in addition, users of multiple OpenVMS VAX layered products can obtain DECwindows Motif binaries and online documentation in Bookreader format as part of the OpenVMS VAX Consolidated Software Distribution (CONDIST) on CD–ROM. The companion Online Documentation Library (CONOLD) CD–ROM contains most of the DECwindows Motif documentation, which can be read using Bookreader.

Software Licenses: QL-XA1A*-**

Software Media:
Motif binaries and Bookreader (user and programming) documentation (CD–ROM): QA-XA1AB-H8
Motif binaries and hardcopy user documentation: QA-XA1AA-H* (TK50 or magtape)
OpenVMS VAX CONDIST (Layered Product binaries only): QA-VWJ8A-A8

Documentation:
Hardcopy Motif User Documentation (VAX and Alpha): QA-XA1AA-GZ
Hardcopy Motif Programming Documentation (VAX and Alpha): QA-XA1AB-GZ
OpenVMS VAX CONOLD (Layered Product Bookreader documentation only): QA-VYR8A-G8

Software Product Services: QT-XA1A*-**

Documentation for DECwindows Motif for OpenVMS (VAX and Alpha)

The DECwindows Motif user and programming documentation sets apply to DECwindows Motif on both the VAX and Alpha operating systems. The hardcopy User documentation kit is included in the DECwindows Motif for OpenVMS VAX H-kits. It can also be ordered separately. The hardcopy Programming documentation set must be ordered separately. If you are ordering DECwindows Motif for OpenVMS on a CD, you will receive both the user and most of the programming documentation in Bookreader format.

Because not all books in the DECwindows Motif for OpenVMS Programming documentation kit are available in Bookreader format, you must order the following hardcopy manuals to complete the DECwindows Motif for OpenVMS Programming documentation offering:

- *X Window System Toolkit*: AA-PHF4A-TE
- *X and Motif Quick Reference Guide*: AA-PHQ1B-TE
- *X Window System*: AA-PHF3B-TE
- *OSF/Motif Programmer's Reference*: AA-Q3E5A-TE
- *DECwindows Motif for OpenVMS Quick Reference Card*: AV-PGZ4B-TE

DECwindows Motif Language Variants:

Each language variant kit runs on both VAX or Alpha systems.

Personal Use Software Licenses: QL-XDD**-2B

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Unlimited Use Software Licenses (DECwindows Motif OpenVMS VAX): QL-XDD**-**

Software Media and Documentation: QA-XDD*A-H8

Software Documentation: QA-XDD*A-GZ

SUSL Subscription Service (Alpha): QT-08U**-**
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