



Software Product Description

PRODUCT NAME: Multimedia Services Version 2.4 for DIGITAL UNIX

SPD 48.92.18

DESCRIPTION

Multimedia Services Version 2.4 for DIGITAL UNIX® brings audio and video capabilities to DIGITAL workstations and provides a full software development kit for use by developers of multimedia applications.

Support Hardware

Multimedia Services provides support for the following audio / video hardware:

- Built-in audio on DIGITAL AlphaStations and DIGITAL Personal Workstations running the DIGITAL UNIX Operating System
- AlphaStation Sound Card
- Microsoft Windows Sound board
- Sound and Motion J300 TURBOchannel multimedia option
- FullVideo™ Supreme PCI video option
- FullVideo™ Supreme JPEG PCI video option
- FullVideo Basic PCI video option

Software Components

Run Time

Multimedia Services Version 2.4 for DIGITAL UNIX consists of a run time component and an applications development kit. The runtime component enables use of audio and video utility applications on workstations, and is included with DIGITAL UNIX 4.0.

Major run time features include:

- A set of multimedia utility programs:
 - DECsound - an audio record, playback, and edit utility.
 - AlphaVCR - a video record and playback utility supporting JPEG, Indeo™ AVI, and MPEG1 and 2 files.
 - Audio Control - an audio device selection and control utility
 - Video Odyssey - a video screen saver utility
- Support for various multimedia data and file formats:
 - WAV: IMA ADPCM, G.711 u-law, 8 / 16 bit linear
 - Sun AU u-law
 - AVI: Still JPEG YCbCr Subsampling 2, Still JPEG Y, Motion JPEG YCbCr Subsampling 2, XImage 8-bit, XImage 24-bit, YUV 4:2:2 interleaved, YVU9, Indeo R3.1, Indeo R3.2
 - MPEG-1 Systems (ISO/IEC 11172-1)
 - MPEG-1 Video (ISO/IEC11172-1), H.261
 - MPEG-2 Audio
 - MPEG-2 Video
- Device drivers for various built in and optional audio and video devices

Software Development Kit

The software development kit provides the application programming interface to incorporate the audio and video functions into applications. The sdk must be ordered separately. The sdk includes:

- a Microsoft Video for Windows V1.0 compatible api.
- a Waveform audio recording and playback interface providing:
 - device independent interface to audio hardware
 - record, play back, and audio control functions
 - device query open, close, and configure functions
- Audio compression and decompression
 - IMA ADPCM compress and decompress functions
- Video capture
 - device query, open, close, and configure functions
 - format selection functions
- Video compression, decompression, and rendition
 - compress and decompress functions
 - rendition control functions (dither, brightness, contrast, saturation, and sharpening)
 - access to compression hardware
 - o Sound and Motion J300 option (JPEG)
 - o FullVideo Supreme JPEG option (JPEG)
 - software only codecs (when no hardware available)
- Video output
 - Functions to send data (including graphics, video, and text) to a video output device such as a VCR or television monitor.
- Multimedia file I/O
 - Functions to create, read, and write disk files that store audio data in Waveform Audio (WAVE) and MPEG formats, and audio+video data in Audio /Video Interleaved (AVI) and MPEG file formats.
- Sample source code for many of the functions listed above.

CONFORMANCE TO STANDARDS

Multimedia Services is designed to conform to the following standards:

- Full H.261 support
- MIT X Window System™ Version 11 Release 5 (X11R5) and Version 11 Release 5 (X11R6)
- Microsoft's Video for Windows V1.0 and multimedia extensions in Windows 3.1 and Windows NT V3.1

HARDWARE REQUIREMENTS

Processors Supported:

Alpha:

DEC 3000 Model 300 AXP Workstation
 DEC 3000 Model 300 AXP Workstation with Sound and Motion J300 multimedia option
 DEC 3000 Model 300X AXP Workstation
 DEC 3000 Model 300X AXP Workstation with Sound and Motion J300 multimedia option
 DEC 3000 Model 300LX AXP Workstation
 DEC 3000 Model 300LX AXP Workstation with Sound and Motion J300 multimedia option
 DEC 3000 Model 400 AXP Workstation
 DEC 3000 Model 400 AXP Workstation with Sound and Motion J300 multimedia option
 DEC 3000 Model 500 AXP Workstation
 DEC 3000 Model 500 AXP Workstation with Sound and Motion J300 multimedia option
 DEC 3000 Model 500 AXP Server
 DEC 3000 Model 500X AXP Workstation with Sound and Motion J300 multimedia option
 DEC 3000 Model 600 AXP Workstation
 DEC 3000 Model 600 AXP Workstation with Sound and Motion J300 multimedia option
 DEC 3000 Model 700 AXP Workstation
 DEC 3000 Model 700 AXP Workstation with Sound and Motion J300 multimedia option
 DEC 3000 Model 800 AXP Workstation
 DEC 3000 Model 800 AXP Workstation with Sound and Motion J300 multimedia option
 DEC 3000 Model 900 AXP Workstation
 DEC 3000 Model 900 AXP Workstation with Sound and Motion J300 multimedia option
 DEC 2000 Model 300 with Microsoft Windows Sound System

AlphaStation 200 4/100

AlphaStation 200 4/100 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 200 4/166

AlphaStation 200 4/166 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 200 4/233

AlphaStation 200 4/233 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 250 4/266

AlphaStation 250 4/266 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 255/233 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 255/300 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 400 4/233 with AlphaStation Sound Card

AlphaStation 400 4/233 with AlphaStation Sound Card and FullVideo Basic

FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 500/266

AlphaStation 500/266 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 500/333

AlphaStation 500/333 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 500/400

AlphaStation 500/400 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 500/500

AlphaStation 500/500 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 600 5/266

AlphaStation 600 5/266 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 600 5/300

AlphaStation 600 5/300 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 600 5/333

AlphaStation 600 5/333 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

AlphaStation 600A 5/500

AlphaStation 600A 5/500 with FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option

Personal Workstations au series

Configuration and Consideration Notes:

- Software video playback is highly dependent on CPU and disk I/O performance. For example, software video playback on AlphaStation 200 4/100 while not as fast as other AlphaStations systems, can be configured to improve video playback by minimizing window playback size.
- The Sound and Motion J300 TURBOchannel multimedia option is required for video input, video output, real-time JPEG compression/decompression, and CD-quality audio on DEC 3000 workstations.
- FullVideo Basic, FullVideo Supreme or FullVideo Supreme JPEG option is required for video input on AlphaStation workstations.
- FullVideo Supreme or FullVideo Supreme JPEG option is required real-time JPEG compression /decompression on AlphaStation workstations.
- FullVideo Supreme JPEG option is required for video output on AlphaStation workstations.
- The Sound and Motion J300 option, FullVideo Basic, FullVideo Supreme and FullVideo Supreme JPEG options are supported with the following restrictions in this version of Multimedia Services for DIGITAL UNIX:

Sound and Motion J300 Limitations & Considerations

- No more than two Sound and Motion J300 options are supported per workstation.
- Digital audio input/output is not supported.
- ADPCM (hardware audio compression) is not supported.
- Video input in PAL and SECAM formats and output in PAL are supported in field mode only. Frames are de-interlaced in application software.

— The audio features of a Sound and Motion J300 option card cannot be used while the video, compression, or decompression features of that card are being used on the DEC 3000 Models 300, 300L and 300 LX. All other DEC 3000 workstations with the J300 can use simultaneous audio and video.

FullVideo Supreme and FullVideo Supreme JPEG Limitations & Considerations

— No more than two FullVideo Supreme or FullVideo Supreme JPEG options are supported per workstation.

— Video input in PAL and SECAM formats and output in PAL are supported in field mode only. Frames are de-interlaced in application software.

FullVideo Basic limitations and considerations

— No more than two FullVideo Basic options are supported per workstation

Disk Space Requirements

Disk space required for installation:

Runtime: 33 MB

Development: 36 MB (includes runtime)

Disk space required for use (permanent):

Runtime: 27.0 MB

Development: 30.0 MB (includes runtime)

These counts refer to the disk space required on the system disk. The sizes are approximate; actual size may vary depending on the user's system environment, configuration and software options.

Memory Requirements for Motif® and CDE Support

The minimum memory supported for audio and video applications in a standalone Motif or CDE environment is 32 MB.

The performance and memory usage of multimedia applications are particularly sensitive to system configuration. More memory may be required on a system with several applications running, or where it may be desirable to improve the performance of an application.

The use of this software in conjunction with increased memory capability improves performance for many applications. The memory size suggested for most typical hardware configurations when using audio and video is 64 MB or 96 MB, depending on the system.

OPTIONAL HARDWARE

Multimedia Services for DIGITAL UNIX supports the following optional hardware:

- Microsoft Windows Sound board option
- AlphaStation Sound Card
- FullVideo Supreme PCI video option
- FullVideo Supreme JPEG PCI video option
- FullVideo Basic video option
- Sound and Motion J300 TURBOchannel multimedia option

SOFTWARE REQUIREMENTS

- DIGITAL UNIX V3.2C up to and including DIGITAL UNIX V4.0C

For the development of applications and programs that use Multimedia Services Development Kit for DIGITAL UNIX, one of the Multimedia Services supported languages is also required.

OPTIONAL SOFTWARE

Multimedia Services Version 2.4 for DIGITAL UNIX supports the following language:

- DIGITAL UNIX C Developers' Extensions Version 1.3

Note: Certain versions of these products are dependent upon a specific version of the operating system. Please refer to the Software Product Description (SPD) of the product in question to determine which version is necessary.

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

The Software development kit is available on the:

- DIGITAL CD-ROM Software Library for DIGITAL UNIX
- Multimedia Software Development CD-ROM kit

The runtime kit is available on the:

- DIGITAL CD-ROM Software Library for DIGITAL UNIX
- Multimedia Software Development CD-ROM kit
- Multimedia Runtime CD-ROM kit
- Factory Installed Software on Alpha Workstations

ORDERING INFORMATION

Software Licenses:

Development Option: QL-20ZA*-AA
Runtime Option: QL-20YA*-AA

Software Development Kit:

Media: QA-20ZAA-H8
Documentation: QA-20ZAA-GZ

Runtime Kit:

Media: QA-20YAA-H8
Documentation: QA-20YAA-GZ

Software Product Services: QT-20Z**-**, QT-20Y**-**

* Denotes variant fields. For additional information on available licenses, services, and media, refer to the appropriate price book.

The above information is valid at time of release. Please contact your local DIGITAL office for the most up-to-date information.

SOFTWARE LICENSING

This software is furnished only under a license. For more information about DIGITAL licensing terms and policies, contact your local DIGITAL office.

The Software Development Kit supports the DIGITAL UNIX License Management Facility. The Runtime kit is licensed under the operating system. Any licensed user of DIGITAL UNIX is licensed to run this kit.

For more information on the License Management Facility, refer to the DIGITAL UNIX Operating System documentation.

SOFTWARE PRODUCT SERVICES

A variety of service options are available from DIGITAL. For more information, contact your local DIGITAL office.

SOFTWARE WARRANTY

Warranty for this software product is provided by DIGITAL with the purchase of a license for the product as defined in the Software Warranty Addendum of this SPD.

® Motif is a registered trademark of Open Software Foundation, Inc.

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® PostScript is a registered trademark of Adobe Systems, Inc.

™ FullVideo is a trademark of Digital Equipment Corporation. FullVideo Basic is a technology licensed from ATI technologies, Inc.

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™ X Window System is a trademark of Massachusetts Institute of Technology.

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