



Software Product Description

PRODUCT NAME: Compaq Multimedia Services Version 2.2
for OpenVMS Alpha

SPD 64.24.02

DESCRIPTION

Compaq Multimedia Services Version 2.2 for OpenVMS Alpha brings audio and video capabilities to Compaq's Alpha systems, and provides a full programming library for use by developers of new applications.

Along with support for OpenVMS Version 7.1-2 and 7.2-1 or later, Compaq Multimedia Services provides support for the following built-in and optional audio/video hardware:

- Compaq Creative Labs AudioPCI Card (Ensoniq 1373 chip)
- Audio on Compaq's Alpha systems running the OpenVMS Alpha operating system
- AlphaStation Sound Card
- FullVideo Supreme PCI video option
- FullVideo Supreme JPEG PCI video option

The application programming interface is based on the original multimedia interface provided in Microsoft Windows NT and Windows 3.1 operating systems, including Video for Windows.

Compaq Multimedia Services Version 2.2 for OpenVMS Alpha is packaged in two licenses: a run-time license and a development license.

The run-time license enables audio play and record and software video playback on Alpha systems, as well as video capture if a FullVideo Supreme option is present.

Features include:

- AlphaVCR, a utility that:
 - Plays live video and audio

- Plays back AVI files containing a variety of compressed video types, including: Motion JPEG (MJPEG), YUV 4:2:2, and RGB
- Has controls to manage brightness and contrast
- Plays MPEG-1 audio/video or MPEG-1 video files
- Plays AVI files to an output video device such as a VCR or TV monitor. File format support is dependent upon hardware option. The FullVideo Supreme supports playing either X image or YUV data to video out. The FullVideo Supreme JPEG supports playing X image, YUV, or JPEG data to video out. Note that playing Indeo files to video out is not currently supported.

VIDEO

JPEG	play, record
24-bit RGB	play, record

AUDIO

Microsoft Wave Audio	play, record
Sun Audio	play

- DECSound, an audio record, playback, and edit utility.
- Audio Control, a utility to control volume and port selection for all audio devices.
- Video Odyssey, a video screen saver that displays Motion JPEG AVI files through JPEG software decompression, requiring no additional video hardware.
- Support for standard Microsoft Resource Interchange File Format (RIFF) file I/O in AVI and WAVE file formats in the utilities. This allows sharing of many audio and some video files between PCs and Alpha systems.
- Audio and video clips.

- Low-level drivers for audio on Alpha systems, Compaq Creative Labs AudioPCI card (Ensoniq 1373 chip), the AlphaStation Sound Card, the FullVideo Supreme and FullVideo Supreme JPEG PCI multimedia options.
- Supports two FullVideo Supreme and FullVideo Supreme JPEG boards in a single system, including heterogeneous support.

File formats supported include:

- WAV: IMA ADPCM, G.711 mu-law, 8-bit linear, 16-bit linear
- Sun AU (read only): mu-law
- AVI: Motion JPEG YCbCr Subsampling 2, Motion JPEG Y, X image 8-bit, X image 24-bit, YUV 4:2:2 interleaved
- Other: MPEG-1 Systems (ISO/IEC 11172-1), MPEG-1 Video (ISO/IEC 11172-1)

The Compaq Multimedia Services Development license provides the application programming interface to incorporate the audio and video functions into applications. Features include:

- API callable from C, based on Microsoft's multimedia calls in Windows NT and Windows 3.1 operating systems and Video for Windows Version 1.0

This compatibility eases porting of multimedia applications from Windows platforms to Alpha systems by reducing the programmer's learning curve and the coding changes required for a successful OpenVMS Alpha implementation.

- Waveform audio recording and playback
 - Device-independent interface to the audio hardware in the Alpha systems, including Compaq Creative Labs AudioPCI card (Ensoniq 1373 chip), audio hardware, the AlphaStation Sound Card.
 - Functions to record, play back, and control audio including volume, stop, start, and pause.
 - Functions to query device capabilities and to open, close, and configure devices.
- Video capture
 - Functions to capture video with selectable capture formats of JPEG compressed, 16-bit YUV, 8-bit dithered, and 24-bit true color. Depending upon the option, more than one type of capture can occur simultaneously. The FullVideo Supreme JPEG can capture both JPEG and non-JPEG simultaneously but only with certain combinations of data formats. The FullVideo Supreme does not

support more than one type of simultaneous capture. Video input can be NTSC, PAL, SECAM, composite, or S-video formats.

- Functions to query device capabilities and to open, close, and configure devices.
- Functions to modify the quality of the rendered video data, including brightness, contrast, mirror, saturation, and sharpening.
- Video compression and decompression
 - Functions to compress and decompress video data, and manage devices and control parameters that affect the quality of dithered 8-bit X images such as brightness, contrast, saturation, and sharpening.
 - JPEG compression and decompression support for the FullVideo Supreme JPEG option.
 - Alpha CPU performance allows JPEG decompression and compression support through software only for video playback and decompression.
- Video output
 - Functions to send data (including graphics, video, and text) captured on the workstation monitor to a video output device such as a VCR or television monitor.
 - NTSC frame and PAL field formats are supported.
- Multimedia and image file I/O
 - Functions to create, read, and write disk files that store audio and video data in Waveform Audio (WAVE) and Audio/Video Interleaved (AVI) file formats.
 - Sample code for many of the functions listed above.
 - Documentation.

CONFORMANCE TO STANDARDS

Multimedia Services is designed to conform to the following standards:

- MIT X Window System Version 11 Release 5 (X11R5)
- Microsoft's Video for Windows V1.0 and multimedia extensions in Windows 3.1 and Windows NT V3.1
- IMA ADPCM
- ITU-T G.711
- ISO/IEC 11172 Parts 1, 2, & 3 (MPEG-1 Systems, Video, and Audio)
- ISO/IEC 10918-1 (JPEG Baseline Process)

HARDWARE REQUIREMENTS

- AlphaStation Sound board, supported on:
AlphaStation 400, 500, 600
DPWS 600 au series
- Embedded AlphaStation Sound board compatible chip, supported on:
AlphaStation 200, 255
- Creative Labs AudioPCI card (Ensoniq 1373 chip), supported on:
Compaq AlphaStation XP900, XP1000 systems
AlphaStation/AlphaServer DS10, DS20e, ES40
AlphaServer DS10L
- FullVideo Supreme or FullVideo Supreme JPEG option supported on:
AlphaStation 250, 400, 500, 600

Notes:

- Software video playback is highly dependent on CPU and disk I/O performance.
- No more than one audio card option is supported per AlphaStation system.
- The FullVideo Supreme or FullVideo Supreme JPEG option is required for video input and video output on AlphaStation systems.
- The FullVideo Supreme and FullVideo Supreme JPEG options are supported with the following restrictions in this version of Multimedia Services for OpenVMS Alpha:

FullVideo Supreme and FullVideo Supreme JPEG Limitations & Considerations

- No more than two FullVideo Supreme or FullVideo Supreme JPEG options are supported per AlphaStation.
- Video input in PAL and SECAM formats and output in PAL are supported in field mode only. Frames are de-interlaced in application software.

Disk Space Requirements

Disk space required for installation:

- Runtime: 20.3 MB (5.6 MB for runtime and 14.7 MB for sample clips)
- Development: 3.5 MB

Disk space required for use (permanent):

- Runtime: 20.3 MB (5.6 MB for runtime and 14.7 MB for sample clips)
- Development: 3.5 MB

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 Support

The minimum memory supported for audio and video applications in a standalone Motif environment is 64 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. When using audio and video the memory size suggested for most typical hardware configurations is 96 MB.

OPTIONAL HARDWARE

Multimedia Services for OpenVMS Alpha supports the following optional hardware:

- Compaq Creative Labs AudioPCI card (Ensoniq 1373 chip)
- AlphaStation Sound Card
- FullVideo Supreme PCI video option (AV301-AA)
- FullVideo Supreme JPEG PCI video option (AV321-AA)

SOFTWARE REQUIREMENTS

- OpenVMS Alpha Version 7.1-2 or 7.2-1 and higher

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

OPTIONAL SOFTWARE

Compaq Multimedia Services Version 2.2 for OpenVMS Alpha supports the following language:

- Compaq C V5.7 or higher

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 and software requirements for any future version of this product may be different from the requirements for the current version.

DISTRIBUTION MEDIA

This product is distributed only on the OpenVMS Alpha Software Product Library. This software library (order number QA-03XAA-H8) contains the binaries and on-line documentation in Bookreader and PostScript format. The Multimedia Services documentation is also available in hardcopy and must be ordered separately.

ORDERING INFORMATION

Software Licenses:

Development Option: QL-4G8A*-AA

Run-Time Option: QL-4G9A9-AA

Software Media: QA-03XAA-H8

Software Documentation: QA-4G8AA-GZ,

QA-4G9AA-GZ

Software Product Services: QT-4G8**-**, QT-4G9**-**

* 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 Compaq support representative for the most up-to-date information.

SOFTWARE LICENSING

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

License Management Facility Support

This software product supports the OpenVMS Alpha License Management Facility.

For more information on the License Management Facility, refer to the OpenVMS Alpha operating system documentation.

SOFTWARE PRODUCT SERVICES

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

SOFTWARE WARRANTY

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

YEAR 2000 READINESS

This product is capable of accurately processing, providing, and/or receiving date data from, into, and between the twentieth and the twenty-first centuries, and the years 1999 and 2000, including leap-year calculations, when used in accordance with the associated product documentation and provided that all hardware, firmware, and software used in combination with the product properly exchange accurate date data with the product.

Please refer to the Compaq Web site for details.
<http://www.compaq.com/year2000/>

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