

# Software Product Description

PRODUCT NAME: VAXcamera Software for VMS, Version 1.0

SPD 33.43.00

## DESCRIPTION

The VAXcamera product captures video images from a video source and sends the images to a VWS or DECwindows workstation located on a DECnet network. The VAXcamera product consists of the Video Image Server (VIS) hardware and two software packages, the Video Image Executive (VIX) and the Video Image Developer (VID).

The Video Image Executive executes on the VAXcamera Video Image Server and is used in conjunction with the workstation-based software, the Video Image Developer. The Video Image Developer executes on an eight-plane Digital workstation. The VAXcamera Video Image Server converts video signals into digital data. The Video Image Executive, Video Image Developer, and Video Image Server are offered as a combined hardware and software product.

The Video Image Executive is used to control the VAXcamera Video Image Server through an easy-to-use menu-driven interface. With the Video Image Executive, users can capture, analyze, manipulate, and enhance video images from a number of sources. Once an image is captured, it can be sent easily and quickly over a Local Area or Wide Area DECnet network to an eight-plane Digital workstation.

The Video Image Developer is used on an eight-plane Digital workstation to convert the raw image data from the Video Image Server to the workstation-dependent format. Prior to converting the image, the Video Image Developer pauses to allow the user to adjust the contrast and brightness of the image. When used in the DECwindows environment, images can then be used in other CDA-compliant applications, such as DECpresent and DECwrite.

The VAXcamera product consists of the following hardware and software components:

### *VAXcamera Hardware*

- High Resolution Video Camera
- Character Cell Terminal
- RGB Monitor

- VAXcamera Video Image Server

### *VAXcamera Software*

- Video Image Executive
- Video Image Developer

### *Video Image Executive*

The Video Image Executive is layered on Digital's VAX-ELN Realtime operating environment. VAXELN insures fast, predictable performance for the Video Image Executive. The Video Image Executive menu is easy to use and includes options to perform image analysis, sharpness filtering, image addition, subtraction, and averaging. Menu options allow users to digitize images in 2 to 128 distinct shades of gray. High quality gray scale images can be produced containing 512 x 480 pixels with up to 128 shades of gray. Once images are captured and enhanced, they can be transmitted via Ethernet to any system on a Local Area or Wide Area DECnet network.

The Video Image Executive contains a robust set of image enhancement routines. These routines are grouped according to the following imaging functions:

- IMAGE DISPLAY — The image display options contain the basic, most frequently performed imaging tasks, such as image capture, image storage and retrieval, and screen and buffer clearing.
- IMAGE TRANSFER — The image transfer options let users transfer images between the screen and buffer areas.
- IMAGE ENHANCEMENT — The image enhancement options allow users to adjust certain visual qualities of displayed images. For example, the sharpness filter can be used to sharpen the image or users can select the contrast enhancement option and adjust the image contrast.
- IMAGE ANALYSIS — The image analysis options involve the use of frame addition, averaging, subtraction, or false color to analyze images.

- **SET-UP FUNCTIONS** — The set-up functions allow users to set up the Video Image Server environment. Using these commands, users can verify the integrity of the system, activate the appropriate video input channel, and select the proper video signal synchronization mode.

#### *Video Image Developer*

The Video Image Developer is an image enhancement application that runs on any eight-plane Digital workstation in either VWS or DECwindows environments. The Video Image Developer allows users to convert the raw image data from the Video Image Server to the workstation-dependent format.

Video Image Developer provides the following features and functions:

- Displays the image taken with the VAXcamera Video Image Server on the workstation screen
- Allows users to make brightness and contrast enhancements to an image
- Allows the user to store the VAXcamera image in a file format applicable to that workstation software, VWS as a .UIS metafile, or DECwindows as a .DDIF file

From a workstation, these VAXcamera .UIS or .DDIF images can be transmitted via Ethernet to any system on a DECnet network, providing the capability for on-line distribution and viewing of information using VWS Render, DCL/IMAGE, or the CDA viewer.

The Video Image Developer also provides capability for producing hardcopy output using a number of print devices that support SIXEL or PostScript® protocols.

#### *VWS Environment*

The Video Image Developer, in the VWS environment, produces a .UIS file that can then be Rendered to PostScript, SIXEL, and other data formats. The Video Image Developer contains the Picture Markup Utility (PMU), which is a special version of the VWS SIGHT graphic editor that allows importing of grayscale .UIS images. Using the Picture Markup Utility, users can overlay text and graphics on an image and save the image, along with the annotations, to a single file. The image itself, however, cannot be edited. The VWS version outputs hardcopy to LA50, LA70, LA75, LA100, LA210, LA324, LN03, LN03 PLUS, LN03R, LN03Q, LPS20, and LPS40 printers.

#### *DECwindows Environment*

The Video Image Developer, in the DECwindows environment, has more built-in features than the VWS version. The Video Image Developer allows users to output the VAXcamera image in .DDIF format, PostScript and Encapsulated PostScript, VT240 and VT340 SIXEL. The VAXcamera DDIF image files can be annotated and included in compound documents such as DECwrite and DECpresent. The DECwindows version outputs hardcopy to LN03R, LN03Q, LPS20, LPS40, and most other PostScript devices.

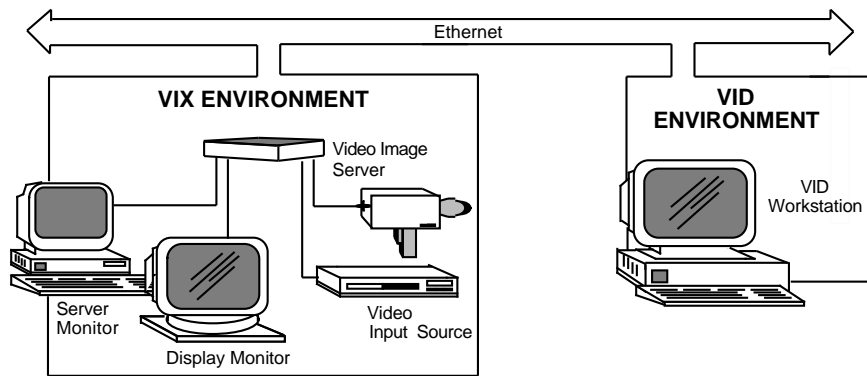
#### *Video Image Server*

The Video Image Server captures and digitizes video images from an RS170 or, at a lesser quality, an NTSC video input source. Typical sources of video images can be a video camera, video cassette recorder (VCR), scanning electron microscope (SEM), or an x-ray machine. Nearly any video signal that conforms to RS170 or NTSC video standard can be digitized. Once the image has been captured, it can then be enhanced via the Video Image Executive's video imaging routine. The enhanced video image can then be sent over the Ethernet to any eight-plane VWS or DECwindows workstation located on the Local Area or Wide Area DECnet network.

Figure 1 shows the VAXcamera Video Image Server (in the center) attached to a typical Ethernet configuration. The VAXcamera solution includes the VAXcamera Video Image Server, RGB Monitor, Character Cell Terminal, Camera, Video Image Executive and Video Image Developer software. Installation and training are optionally available.

**Note:** The Load Host for the Video Image Server can be the "developer" workstation.

**Figure 1**  
**Ethernet Configuration**



*Documentation*

VAXcamera includes the following documentation:

- VAXcamera VIS Hardware Set-Up Guide*
- VAXcamera VIX Installation Guide*
- VAXcamera VIX User's Guide*
- VAXcamera VID VWS Installation Guide*
- VAXcamera VID VWS User's Guide*
- VAXcamera VID DECwindows Installation Guide*
- VAXcamera VID DECwindows User's Guide*

**INSTALLATION**

Digital recommends that a customer's first purchase of this software product include Digital Installation Services. These services provide for installation of the software product by an experienced Digital Software Specialist.

*Customer Responsibilities*

Before installation of the software, the customer must:

- Previously have installed all requisite software and hardware, including terminals.
- Make available for a reasonable period of time, as mutually agreed by Digital and the customer, all hardware, communication facilities, and terminals that are to be used during installation.
- For verification of installation and connectivity in a multinode network, designate and provide access to a system-privileged account on a load host and/or workstation that has previously been installed by Digital.
- Obtain, install, and demonstrate as operational any equipment and facilities necessary to interface to Digital's communication equipment.

- Supply to Digital all the information necessary for installation of software as described in the *Video Image Executive Software Installation Guide*.

Installation of a new system where no hardware or software exists will consist of the following:

- Verification that all hardware and software prerequisites have been met and the equipment is operational.
- Verification that a complete set of software media and documentation has been received.
- Verification that the installation information in the Video Image Executive Software Installation is complete.
- Installation of the Video Image Executive Software on one system.
- Verification that the VAXcamera Video Image Executive and Video Image Developer Software has been correctly installed by testing the VAXcamera Software.

Should a Digital Specialist be required to modify the previously installed software parameters, a time and materials charge will apply.

**HARDWARE REQUIREMENTS**

*For the Video Image Server:*

VAX, MicroVAX, VAXstation, or VAXserver configuration as specified in the System Support Addendum (SSA 33.43.00-x)

*For the Video Image Developer:*

8-plane graphics VAXstation with at least 8 MB of memory

VAXstation configurations as specified in the System Support Addendum (SSA 33.43.00-x)

**SOFTWARE REQUIREMENTS**

*For the Video Image Executive:*

VMS Operating System  
DECnet-VAX Extensions

*For the Video Image Developer:*

Video Image Developer software requirements are dependent upon the windowing system selected for the workstation.

*For Workstations Running VWS:*

VMS Operating System  
VWS Workstation Software (with both HCUIS  
and SIGHT options installed)  
DECnet-VAX Extensions

*For Workstations Running DECwindows:*

VMS Operating System (and necessary  
components of VMS DECwindows)  
DECnet-VAX Extensions

Refer to the System Support Addendum (SSA 33.43.00-x) for availability and required versions of prerequisite/optional software and for information regarding components of VMS DECwindows.

**ORDERING INFORMATION**

*Video Image Executive*

Software License: QL-YWUA9-AA  
Software Media and Documentation: QA-YWUAA-H5  
Software Documentation: QA-YWUAA-GZ  
Software Product Services: QT-YWUA\*-\*\*

*Video Image Developer*

Software License: QL-YWVA9-AA  
Software Media and Documentation: QA-YWVAA-H5  
Software Documentation: QA-YWVAA-GZ

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

**SOFTWARE LICENSING**

This software is furnished under the licensing provisions of Digital Equipment Corporation's Standard Terms and Conditions. For more information about Digital's licensing terms and policies, contact your local Digital office.

**LICENSE MANAGEMENT FACILITY SUPPORT**

This layered product supports the VMS License Management Facility.

License units for this product are allocated on a CPU-capacity basis.

For more information on the License Management Facility, refer to the VMS Operating System Software Product Description (SPD 25.01.xx) or the *License Management Facility* manual of the VMS Operating System documentation set.

For more information about Digital's licensing terms and policies, contact your local Digital office.

**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.

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# System Support Addendum

PRODUCT NAME: VAXcamera Software for VMS, Version 1.0

SSA 33.43.00-A

## HARDWARE REQUIREMENTS

### *Processors Supported as Video Image Executive Load Host*

VAX: VAXft 3000 Model 310

VAX 4000 Model 200,  
VAX 4000 Model 300

VAX 6000 Model 200 Series,  
VAX 6000 Model 300 Series,  
VAX 6000 Model 400 Series,  
VAX 6000 Model 500 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 9000-210, VAX 9000 Model 400 Series

VAX-11/730, VAX-11/750, VAX-11/780,  
VAX-11/785

MicroVAX: MicroVAX II, MicroVAX 2000,  
MicroVAX 3100, MicroVAX 3300,  
MicroVAX 3400, MicroVAX 3500,  
MicroVAX 3600, MicroVAX 3800,  
MicroVAX 3900

VAXstation: VAXstation II, VAXstation 2000,  
VAXstation 3100 Series, VAXstation 3200,  
VAXstation 3500, VAXstation 3520,  
VAXstation 3540

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 6000-210, VAXserver 6000-220,  
VAXserver 6000-310, VAXserver 6000-320,  
VAXserver 6000-410, VAXserver 6000-420,  
VAXserver 6000-510, VAXserver 6000-520

### *Processors Not Supported*

MicroVAX I, VAXstation I, VAX-11/725, VAX-11/782,  
VAXstation 8000

### *Load Host Processor Restrictions*

Video Image Executive loads from any of the noted processors to a Video Image Server via ThinWire or Thick-wire Ethernet.

Video Image Executive Software requires a valid VAX system host with a minimum system configuration of:

- 6 MB of memory
- Ethernet Controller Interface
- TK50 Tape Drive
- System Disk

### *Other Hardware Required*

Ethernet ThinWire or Thickwire is required to connect the VAXcamera Video Image Server to the same network as the workstation running Video Image Developer.

A DECnet Node Name and Address is required.

### *Disk Space Requirements (Block Cluster Size = 1):*

Disk space required for installation: 600 blocks  
(307.2 Kbytes)

Disk space required for use (permanent): 600 blocks  
(307.2 Kbytes)

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.

## CLUSTER ENVIRONMENT

This layered product is fully supported when installed on any valid and licensed VAXcluster\* configuration without restrictions. The *HARDWARE REQUIREMENTS* sections of this product's Software Product Description and System Support Addendum detail any special hardware required by this product.

- \* V5.x VAXcluster configurations are fully described in the VAXcluster Software Product Description (29.78.xx) and include CI, Ethernet, and Mixed Interconnect configurations.

## SOFTWARE REQUIREMENTS

### *For a VMS Host*

VMS Operating System V5.0 - V5.4  
DECnet V5.0 - V5.4 configured as a ROUTING  
or an END node

### *VMS Tailoring*

For VMS V5.x systems, the following VMS classes are required for full functionality of this layered product:

- VMS Required Saveset
- Network Support
- System Programming Support
- Secure User's Environment
- Utilities

For more information on VMS classes and tailoring, refer to the VMS Operating System Software Product Description (SPD 25.01.xx).

## 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

TK50 Streaming Tape

## ORDERING INFORMATION

### *Video Image Executive*

Software License: QL-YWUA9-AA  
Software Media and Documentation: QA-YWUAA-H5  
Software Documentation: QA-YWUAA-GZ  
Software Product Services: QT-YWUA\*-\*\*

- \* 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.

## HARDWARE REQUIREMENTS

### *Processors Supported as Video Image Developer*

VAXstation: 8-plane graphic versions of VAXstation II, VAXstation 2000, VAXstation 3100 Series, VAXstation 3200, VAXstation 3500

### *Processors Not Supported*

VAXstation I, VAXstation 3520, VAXstation 3540, VAXstation 8000

### *Video Image Developer Processor Restrictions*

- 8-Plane Video Workstation.
- 8 MB of memory is required.
- Ethernet Controller Interface.
- A TK50 Tape Drive is required for loading the Video Image Developer onto the workstation.

### *Disk Space Requirements (Block Cluster Size = 1):*

#### *Video Image Developer for VWS*

Disk space required for installation: 1,500 blocks  
(768 Kbytes)

Disk space required for use (permanent): 1,500 blocks  
(768 Kbytes)

#### *Video Image Developer for DECwindows*

Disk space required for installation: 1,000 blocks  
(512 Kbytes)

Disk space required for use (permanent): 1,000 blocks  
(512 Kbytes)

*Additional Storage Requirements for Video Image Developer VWS and Video Image Developer DECwindows:*

File Created by	Format	Average Blocks per File
VIX software	Binary	480
VID VWS software	VWS	610
VWS RENDER	PostScript®	1,300
VWS RENDER	SIXEL	600

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.

*Memory Requirements for DECwindows Support*

The minimum supported memory for this application running in a standalone DECwindows environment with both the workstation and server executing on that same system is 8 megabytes.

The minimum memory supported is 8 megabytes. However, the use of this software in conjunction with increased memory capability improves performance. The memory size suggested for most typical hardware configurations is at least 8 megabytes.

**CLUSTER ENVIRONMENT**

This layered product is fully supported when installed on any valid and licensed VAXcluster\* configuration without restrictions. The *HARDWARE REQUIREMENTS* sections of this product's Software Product Description and System Support Addendum detail any special hardware required by this product.

\* V5.x VAXcluster configurations are fully described in the VAXcluster Software Product Description (29.78.xx) and include CI, Ethernet, and Mixed Interconnect configurations.

**SOFTWARE REQUIREMENTS**

*For the Video Image Executive:*

- VMS Operating System V5.0 - V5.4
- DECnet-VAX V5.0 - V5.4 Extensions

*For the Video Image Developer:*

Video Image Developer software requirements are dependent upon the windowing system selected for the workstation.

*For Workstations Running VWS:*

- VMS Operating System V5.1 - V5.4
- VWS Workstation Software V4.1 - V4.3 (with both HCUIS and SIGHT options installed)
- DECnet-VAX V5.1 - V5.4 Extensions

*For Workstations Running DECwindows:*

- VMS Operating System V5.3 - V5.4 (and necessary components of VMS DECwindows)
- DECnet-VAX V5.3 - V5.4 Extensions

**OPTIONAL SOFTWARE**

- DECwrite V1.1
- DECpresent V1.0

**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**

- TK50 Streaming Tape

**ORDERING INFORMATION**

*Video Image Developer*

- Software License: QL-YWVA9-AA
- Software Media and Documentation: QA-YWVAA-H5
- Software Documentation: QA-YWVAA-GZ

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

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