COMPAQ

Software Product Description

PRODUCT NAME: DIGITAL PCI-VME Adapter Driver, DIGITAL UNIX, Version 4.2 **SPD 61.54.05**

DESCRIPTION

The DIGITAL PCI-VME Adapter Driver, DIGITAL UNIX®, is a software product that is sold as a part of the DIGITAL PCI-VME Adapter for DIGITAL UNIX (Compaq part number DWPVC-BA) which includes the adapter hardware.

The PCI-VME Adapter Driver for DIGITAL UNIX provides a flexible interface to the VMEbus. This enables the attachment of a wide variety of specialized input /output devices that have been developed for the VMEbus.

The PCI-VME Adapter for DIGITAL UNIX was developed as an option for workstations and servers running DIGITAL UNIX that have a PCI I/O bus. The DIGITAL UNIX Operating System alone does not support the PCI-VME Adapter. The PCI-VME Adapter Driver for DIGITAL UNIX provides the operating system extentions required for support of the PCI-VME Adapter.

In addition to the PCI-VME Adapter Driver software, the DWPVC-BA includes a set of two option modules and an interconnecting cable–Model 617 PCI-to-VMEbus Adapter from SBS Bit 3™ Operations.

The PCI module occupies one slot on a PCI Local Bus. The VME module occupies one slot of size '6U' on a VMEbus. Both modules use 32 bit data paths. The DWPVC-BA thus provides a PCI to VME bridge. The PCI-VME Adapter Driver supports this bridge and is a prerequisite for support of devices residing on the VMEbus so that they can communicate with the Alpha system.

The PCI-VME Adapter Driver software does not provide UNIX device drivers for VME devices. Appropriate DIGITAL UNIX device drivers are required for each of the VME options installed on the VMEbus. VME device drivers use the PCI-VME Adapter Driver to gain access to the device(s) on the VMEbus. The VME device drivers must be written or purchased by the customer.

Compaq offers a custom service for writing VME device drivers. For information on this service call 1-800-344-4285 or send mail to cs_hpc@compaq.com.

Memory mapped I/O via the PCI-VME Adapter is supported subject to the technical limitations and restrictions per the DIGITAL UNIX Operating System (SPD 41.61.nn) and the latest technical documentation for the DWPVC-BA. Refer to the DIGITAL UNIX Operating System Software Product Description for complete details on memory mapped I/O support.

Controller mode Direct Memory Access (DMA), slave mode DMA, and Programmed I/O are supported. Controller mode DMA is initiated by the Alpha host system and uses the DMA engine on the VME card of the PCI-VME adapter. Slave mode DMA is initiated by another device on the VMEbus and uses that device's DMA engine.

CONFORMANCE TO STANDARDS

The PCI-VME Adapter conforms to the following ANSI /IEEE Standards:

- 1014-1987 IEEE Standard for a Versatile Backplane Bus: VMEbus,
- PCI Local Bus Specification Version 2.0.

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HARDWARE REQUIREMENTS

Platforms Supported

AlphaStation 200	AlphaStation 250
AlphaStation 255	AlphaStation 400
AlphaStation 500	AlphaStation 600
AlphaStation 600A	

AlphaServer 300	AlphaServer 400
AlphaServer 800	AlphaServer 1000
AlphaServer 1000A	AlphaServer 1200
AlphaServer 2000	AlphaServer 2100
AlphaServer 2100A	AlphaServer 4000
AlphaServer 4100	

DMCC(PCI Passive Backplane)

Digital Personal Workstations - all current models

Platforms Not Supported

DEC 3000	DEC 4000
DEC 7000	DEC 10000

AlphaServer DS20	AlphaServer GS60
AlphaServer GS140	

VAX and other RISC based processors are not supported.

Other Hardware Required:

One (1) of the following adapters plus the chassis:

DWPVC-BA	PCI-VME Adapter **OR**
Model 617	Bit 3 PCI-to-VME Adapter
VMEbus chassis	Card cage to install 6U VME module

PCI-VME Adapter Restrictions:

The following restrictions apply to the PCI-VME adapter hardware and software:

- Installation of the PCI module in a PCI slot which supports shared interrupts is not supported.
- Installation of the PCI module in a PCI slot which is behind a PCI-PCI bridge chip (ie. secondary PCI bus) is not supported.
- Due to the tightly integrated nature of the module set, power to the VME module must remain on while the DIGITAL UNIX operating system is running. Powering off the VMEbus chassis while the DIGITAL UNIX operating system is running will cause unpredictable results and possible system crashes. Therefore, the DIGITAL PCI-VME Adapter Driver does NOT support powering off the VMEbus chassis while the operating system is running.
- Controller mode DMA transfers require that no slave mode DMA or programmed I/O (PIO) transfers occur during the controller mode DMA transfer. Occurrence of such data transactions during controller mode DMA transfers will cause unpredictable results and possible system crashes.
- The minimum supported module revisions for the supported systems listed above are:
  - — PCI module - Revision S
  - — VME module - Revision N

Contact SBS Bit 3 Operations at (651)-905-4700 to discuss hardware upgrade options.

Disk Space Requirements

Disk space required for installation:	1 MB
Disk space required for use (permanent):	1 MB

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.

SOFTWARE REQUIREMENTS

- DIGITAL UNIX Operating System V4.0A or higher.

  Note: This product will require reinstallation when DIGITAL UNIX is upgraded to a new version.

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

ORDERING INFORMATION

Software Licenses: QL-37JA9-AA
Software Media/Documentation: QA-37JAA-H8
Software Documentation: QA-37JAA-GZ
Software Product Services: QT-37JA*-**

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

SOFTWARE LICENSING

This software is relicensable in conjunction with the DIGITAL PCI-VME Adapter hardware.

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

License Management Facility Support:

This product is licensed on an Unlimited System Use basis only.

This product supports the License Management Facility.

SOFTWARE PRODUCT SERVICES

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

For information on VMEbus device driver development services, call 1-800-344-4825 or send mail to cs_hpc@compaq.com.

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.

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