Software Product Description

PRODUCT NAME: VAX Wide Area Network (WAN) Device Drivers, Version 1.1B SPD 29.64.02

DESCRIPTION

VAX Wide Area Network (WAN) Device Drivers contains the VMS Device Drivers for Digital's synchronous communications devices. The Device Drivers included in this product support the following devices:

Table 1
Synchronous Communications Devices

Busless Systems	Q-bus Systems	MI-bus Systems	VAXBI Systems	UNIBUS Systems
DSH32	DMV11	DSF32	DMB32	DMC11
DST32	DPV11		DSB32	DMF32
	DSV11			DMR11
	KMV1A			DUP11
				KMS11-BD
				KMS1P

Refer to *Table 1* in the System Support Addendum (SSA 29.64.02-x) for details of line speeds for supported protocols and to *Table 2* in the System Support Addendum (SSA 29.64.02-x) for details of supported processor and device combinations.

Hardware Devices

- The DSH32 (dual sync line) and DST32 (single sync line) are multi-function devices for Busless systems. The communications controllers support DMA transfers for bit oriented protocols and perform character transmission, reception, and framing in microcode.
- The DMV11 (Q-bus) is a high performance single line communications controller for Q-bus systems. The DMV11 implements DDCMP in firmware and supports DMA data transfers and DDCMP point-to-point configurations. The DMV11 can support up to 12 tributaries depending on the operating system and layered software.
- The DPV11-DA or DPV11-S (Q-bus) and DUP11 (UNIBUS) are character interrupt devices for datalink handling. CPU cycles are required for data link-level protocol processing and for each character sent and received.
- The DSV11 (Q-bus) is a dual line synchronous communications device for Q-bus systems. The DSV11 supports DMA transfers for bit and character oriented protocols. The communications controller performs character transmission, reception and framing in microcode.
- The KMV1A-A or KMV1A-SF (Q-bus) communications controller executes transmission, reception, and X.25 LAPB link-level protocol processing in microcode. Optional link-level software products, drivers and tools are available for the KMV1A device if required. The KMV1A device was previously known as the KMV11-A.
- The DSF32 (MI-bus) is a multi-function device for VAXft 3000-310 fault tolerant systems. The DSF32 provides a dual line synchronous capability and supports DMA transfers for bit and character oriented protocols. The communications controller performs character transmission, reception and framing in microcode. The two lines can be used independently to run different protocols or can be used to provide a failover capability between lines in the event of an application or system failure.
- The DMB32 (BI-bus) and DMF32 (UNIBUS) are

multi-function devices which include a single DMA line. The communications controllers perform character transmission, reception, and framing in microcode.

For the DMB32, rev.J is required for applications using HDLC, SDLC and GENBYTE protocols. In the case of the DMF32, only rev. J and later are supported for use with the HDLC protocol, and rev. M is required for simultaneous operation of the printer port.

- The DSB32 (BI-bus) is a dual line synchronous communications device for VAXBI systems. The DSB32 supports DMA transfers for bit and character oriented protocols. The communications controller performs character transmission, reception, and framing in microcode.

- The DMC11 and DMR11 (UNIBUS) are high performance single line communications controllers that provide local or remote connections between UNIBUS systems. The DMC11 and DMR11 implement DDCMP in firmware and support DMA data transfers and DDCMP point-to-point configurations.

- The KMS1P-A, KMS1P-B and KMS11-B (UNIBUS) products are DMA devices. The KMS communications controller executes character transmission, reception, and X.25 data link-level protocol processing in microcode (LAPB only, for packets not larger than 1024 bytes). The VAX CPU then processes the X.25 packet level protocol. Optional link-level software products and tools available for the KMS devices are not required. The KMS1P-A and KMS1P-B were previously known as the KMS11-PX and KMS11-PY.

Notes:

- The DSH32 and DST32 are not supported on VAXstation 2000 and VAXstation 3100 systems.

- The use of UNIBUS options on a VAXBI system with a UNIBUS Adapter is not supported unless specified in *Table 2* of this Software Product Description.

- The DMB32, DMF32, and DSH32 are multi-function devices. Only the Device Driver for the synchronous ports are included in the VAX WAN Device Drivers.

- The DMB32 must be revision J or later for applications using GENBYTE, HDLC or SDLC protocols.

- The DMF32 must be revision J or later for applications using HDLC protocol.

The VAX WAN Device Drivers includes Device Drivers that are reserved for use by Digital software products as well as Device Drivers that offer a supported User ($QIO) interface. *Table 2* of this SPD lists the Device Driver characteristics. The table entries indicate the maximum permitted line speeds in kilobits/second for each of the line protocols supported by the individual drivers.

The Device Drivers all support full duplex and half duplex operation, where appropriate to the protocol. DDCMP and SDLC Device drivers all support both point-to-point and multipoint tributary operation. 'Bisync' refers to the IBM® implementation of bisynchronous protocol. The Genbyte protocol is a general byte-orientated protocol for use with User-written framing routines.

The maximum permitted line speed depends on the line interface standard used and must not exceed 19.2 Kbps for an RS232/V.24 standard interface. There may be additional line speed restrictions for other line interface standards: refer to the product descriptions for the synchronous interfaces for more information. The Digital communications layered products may not necessarily support operation of the synchronous interface at the maximum speed supported by the device driver. Refer to the appropriate Software Product Description for the Digital communications layered product for precise details of supported configurations.

In all cases, the data throughput over the synchronous lines is dependent on the user applications and system environment.

The device drivers all support modem control signal operation. Refer to the product descriptions for the appropriate synchronous interface for details of the modem signals supported by an individual device.

HARDWARE REQUIREMENTS

VAX, MicroVAX, VAXserver, or VAXstation configuration as specified in the System Support Addendum (SSA 29.64.02-x).

SOFTWARE REQUIREMENTS *

VMS Operating System

* Refer to the System Support Addendum (SSA 29.64.02-x) for availability and required versions of prerequisite/optional software.

ORDERING INFORMATION

Software Licenses: QL-VAWA*-**
Software Media: QA-VAWA*-**
Software Documentation: QA-VAWAA-GZ
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