

Software Product Description

**PRODUCT NAME: VAX KMS11-BD/BE HDLC/BSC
Framing Software, Version 2.1**

SPD 26.55.05

DESCRIPTION

The VAX KMS11-BD/BE HDLC/BISYNCH (BSC) Framing Firmware consists of a VMS software driver and firmware for the KMS11-BD/BE. The VMS software driver and the KMS11-BD/BE software allow VMS users to build and implement custom or standard communication protocols without having to program the KMS11-BD/BE.

The KMS11-BD/BE firmware provides the HDLC or BISYNCH (BSC) framing of the data, as well as the DMA between the KMS11-BD/BE and VAX host. This capability reduces the host of processor overhead associated with character interrupt devices. The VAX host is no longer interrupted on each character transmitted or received, and does not have the software overhead associated with determining what to do with each character as it is received or transmitted. Rather, an interrupt is generated on a message transmitted or received basis, and processing then takes place on the entire message.

The driver is the interface that allows the user to transmit or receive command, control or message data between VMS users, the KMS11-BD/BE firmware, and the remote end of the communication line. The VMS software driver for the KMS11-BD/BE provides the interface which allows the VMS user to send or receive messages for various protocols in the VMS host. These messages are sent or received via DMA from the KMS11-BD/BE HDLC/BISYNCH Framing Software.

The purpose of the KMS11-BD/BE firmware is to provide the basic HDLC or BISYNCH line framing of the messages received or transmitted from the VAX host using a DMA Device. It is the responsibility of a host application program (not supplied with this software) to provide the protocol line control. This program can be written in a higher level language supported on VMS systems.

Features

- Full duplex operation
- Integrated level 2R (on-line) diagnostic support

- Integrated UETP (User Environment Test Program) support
- Support of KMS11-BD/BE HDLC/BISYNCH Framing Firmware
- Loading of the firmware into the KMS11-BD/BE
- Modem initialization, deinitialization
- Transmit data
- Receive data
- Statistics
- User ability to interface via higher level language (e.g., FORTRAN)

Major features provided by the KMS11-BD/BE HDLC /BISYNCH Framing Firmware

- HDLC or BISYNCH framing by line
- Modem control
- DMA to/from host for low CPU overhead and high throughput
- Eight lines supported up to 9.6K bps full duplex or six lines up to 19.2K bps or four lines at 56K bps full duplex
- CRC16 calculation and detection for HDLC Framing
- CRC16 CCITT preset to 0s calculation and detection for HDLC framing
- CRC16 CCITT preset to 1s calculation and detection for HDLC framing

HARDWARE REQUIREMENTS

VAX configuration as specified in the System Support Addendum (SSA 26.55.05-x).

SOFTWARE REQUIREMENTS

VMS Operating System

Refer to the System Support Addendum (SSA 26.55.05-x) for availability and required versions of prerequisite /optional software.

ORDERING INFORMATION

Software Licenses: QL-920A*-**

Software Media: QA-920A*-**

Software Documentation: QA-920AA-GZ

* Denotes variant fields. For additional information on available licenses 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

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 Utility* manual of the VMS Operating System documentation set.

For more information on Digital's licensing policies, 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 System Support Addendum of this SPD.

TM The DIGITAL Logo, CI, MicroVAX, TK, UETP VAX, VAX-cluster, VAXstation, VAXserver and VMS are trademarks of Digital Equipment Corporation.

System Support Addendum

**PRODUCT NAME: VAX KMS11-BD/BE HDLC/BSC
Framing Software, Version 2.1**

SSA 26.55.05-B

HARDWARE REQUIREMENTS

Processors Supported

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

Processors Not Supported

VAXft Model 110,
VAXft Model 310,
VAXft Model 410,
VAXft Model 610,
VAXft Model 612

VAX 4000 Model 200,
VAX 4000 Model 300,
VAX 4000 Model 500

VAX 6000 Model 200 Series,
VAX 6000 Model 300 Series,
VAX 6000 Model 400 Series,
VAX 6000 Model 500 Series,
VAX 6000 Model 600 Series

VAX 9000 Model 110,
VAX 9000 Model 210,
VAX 9000 Model 300 Series,
VAX 9000 Model 400 Series

VAX-11/725, VAX-11/782

MicroVAX, VAXstation, and VAXserver

Processor Restrictions

The number of KMS11-BD/BEs that may be installed is processor specific. Attention must be paid to bus loading and adapter restrictions.

Other Hardware Required

KMS11-BD/BE eight-line programmable communications controller.

Disk Space Requirements (Block Cluster Size = 1)

Disk space required for installation: 555 blocks
(284 Kbytes)

Disk space required for use (permanent): 288 blocks
(147 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.

OPTIONAL HARDWARE

None

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 (SPD 29.78.xx) and include CI, Ethernet, and Mixed Interconnect configurations.

SOFTWARE REQUIREMENTS

VMS Operating System V5.0 - V5.5

VMS Tailoring

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

- VMS Required Saveset
- Programming Support
- System Programming Support
- User Environment Test Package

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

OPTIONAL SOFTWARE

None

GROWTH CONSIDERATIONS

The minimum hardware/software requirements for any future version of this product may be different from the requirements of the current version.

DISTRIBUTION MEDIA

9 Track 1600 Magnetic Tape, TK50 Streaming Tape

ORDERING INFORMATION

Software Licenses: QL-920A*-*^{**}

Software Media: QA-920A*-*^{**}

Software Documentation: QA-920AA-GZ

* Denotes variant fields. For additional information on available licenses 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.

TM The DIGITAL Logo, CI, MicroVAX, TK, UETP, VAX, VAXcluster, VAXft, VAXserver, VAXstation, and VMS are trademarks of Digital Equipment Corporation.