

Software Product Description

PRODUCT NAME: KCM44 Software, Version 3.0

SPD 39.65.01

DESCRIPTION

KCM44 Software is the software component of a special-purpose hardware/software set that makes up the DSA XMI-to-FIPS tape controller. KCM44 Software is executed by the on-board processors within the KCM44. The KCM44 is an intelligent TMSCP tape controller that supports the Digital TA92; the StorageTek® Automated Cartridge System (ACS), 4480, and 4780 tape subsystems; and the IBM® 3480, 3490, and 3490E tape subsystems.

The host computer sends high-level I/O requests to the KCM44 controller and delegates to the subsystem the responsibility for all low-level operations required to implement the requests. Internally, the KCM44 controller uses state machines to direct and effect transfers on the XMI and Bus/Tag (FIPS-60) channels.

Features

The KCM44 Software is comprised of high-performance servers, management software, and utilities.

Servers

- TMSCP Tape Server
- DUP (Diagnostics and Utilities Protocol) Server

The Tape Server services all I/O requests for tape units, and the DUP (Diagnostics/Utilities Protocol) Server services the host-to-utility connection.

Management and Control Software

- SSP (Storage Subsystem Port Protocol)
- Tape Transfer and Communications
- XMI and Tape State Machines (microprocessors)
- Executive Software to Manage the KCM44 processors

Utilities

- CONFIG: Allows an operator to enable and disable tape unit recognition
- PATCH: Allows KCM44 controller software to be patched
- UPDATE: Allows controller software to be reloaded
- EXLPBK: Allows external loopback testing of FIPS connectors
- EVRLM: A program that runs under the VAX Diagnostic Supervisor (VDS) software to allow disaster-mode code update

XMI Connection

The KCM44 attaches to the host computer system via the XMI bus. The KCM44 is comprised of two XMI modules which occupy two adjacent XMI slots.

Supported Device Types

The KCM44 has two data channels and will support up to two tape control units (TA92, StorageTek 4480 or 4780, or IBM 3480, 3490, or 3490E) per channel. Each tape control unit will handle up to eight transports, thus, a KCM44 will handle a maximum of 32 devices.

Optimized Device Management

KCM44 Software converts host requests into device-specific requests. It manages the physical activity of the drives, supporting parallel transfers on the two data channels. The KCM44 is designed for optimized, efficient I/O operations:

- Two Bus/Tag data channels
- Overlapped I/O and error recovery

Error Detection and Recovery

Error detection, recovery, and reporting conform to TM-SCP and SSP architectures. The KCM44 and the devices connected to it (the host, as well as tape units) perform error recovery actions automatically whenever a device error is detected.

Included for host interface detection are:

- Automatic retransmission of data detected as being in error
- Automatic detection of subsystem internal data path errors

The KCM44 participates in control-unit-directed recovery, permitting use of specific retry algorithms which are device dependent.

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 Customer Services Engineer. For subsequent purchases of this software product, only experienced customers should attempt installation.

Digital recommends that all other customers purchase Digital's Installation Services. The customer responsibilities and detailed instructions for installation are defined in the KCM44 User's Guide.

HARDWARE REQUIREMENTS

Processor and/or hardware configurations as specified in the System Support Addendum (SSA 39.65.01-x).

SOFTWARE REQUIREMENTS

VAX-Based Systems:

OpenVMS VAX Operating System

AXP-Based Systems:

OpenVMS AXP Operating System

Refer to the System Support Addendum (SSA 39.65.01-x) for availability and required versions of prerequisite software.

ORDERING INFORMATION

Orders for the KCM44 hardware or TA92-KA, TA92-KB, or TA92-KC will receive the KCM44 hardware, licensed software, and documentation. The license applies to the KCM44 controller on which the server software runs, not to service host node CPUs in the network.

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 product does not provide support for the OpenVMS License Management Facility (LMF). A Product Authorization Key (PAK) is not required for installation or use of this version of the product.

SOFTWARE PRODUCT SERVICES

Software service for this product is covered under the terms and conditions of the Digital Integrated Hardware and Software Customer Service Contracts. 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: KCM44 Software, Version 3.0

SSA 39.65.01-A

HARDWARE REQUIREMENTS

VAX-Based Processors Supported:

VAX: 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 7000 Model 600 Series,
VAX 10000 Model 600 Series

VAX-Based Processors Not Supported:

VAX: 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-11/725, VAX-11/730, VAX-11/750,
VAX-11/780, VAX-11/782, VAX-11/785

VAX 4000 Model 100, VAX 4000 Model 200,
VAX 4000 Model 300, VAX 4000 Model 400,
VAX 4000 Model 500, VAX 4000 Model 600

MicroVAX, VAXstation, VAXserver and VAXft processors are not supported.

AXP-Based Processors Supported:

AXP: DEC 7000 Model 600 Series,
DEC 10000 Model 600 Series

AXP-Based Processors Not Supported:

AXP: DEC 3000 Model 300 Series, DEC 3000
Model 400,
DEC 3000 Model 500 Series, DEC 4000
Model 600

Disk Space Requirements (Block Cluster Size = 1)

Disk space required for installation: 5,300 blocks
(2.7 MB)

Disk space required for use (permanent): 5,300 blocks
(2.7 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

VAX-Based Systems:

OpenVMS VAX Operating System V5.4-2 - V6.0

If tape units under control of the KCM44 are to be served to the cluster, then OpenVMS VAX V5.5 or higher is required.

The VAX 7000 and VAX 10000 processors support the KCM44 under the OpenVMS VAX Operating System only.

AXP-Based Systems:

OpenVMS AXP Operating System V1.5

The DEC 7000 and DEC 10000 processors support the KCM44 under the OpenVMS AXP operating system only.

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, 9-track 1600 BPI Magtape

ORDERING INFORMATION

Orders for the KCM44 hardware or TA92-KA, TA92-KB, or TA92-KC will receive the KCM44 hardware, licensed software, and documentation. The license applies to the KCM44 controller on which the server software runs, not to service host node CPUs in the network.

For attachment to the VAX 6000 and VAX 9000, KCM44 Software and documentation can be ordered under the following part numbers:

KCM44 Software Kit (TK50): QA-MLXAA-H5
KCM44 Software Kit (16MT9): QA-MLXAA-HM
KCM44 Documentation Kit: QA-MLXAA-GZ

For attachment to the VAX 7000, VAX 10000, DEC 7000 and DEC 10000, the KCM44 Software and documentation can be ordered by ordering the shippable console kits separately under the following part numbers:

Software Kit VAX 7000 (CD): QZ-K62AA-E8
Software Kit VAX 10000 (CD): QZ-K61AA-E8
Software Kit DEC 7000 (CD): QZ-K62AB-E8
Software Kit DEC 10000 (CD): QZ-K61AB-E8

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

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