# Software Product Description

**PRODUCT NAME:** **VAX REAL-TIME ACCELERATOR SOFTWARE, Version 2.0A** **SPD 29.43.02**

## DESCRIPTION

VAX REAL-TIME ACCELERATOR SOFTWARE (VAX RTA) is a VMS layered product that integrates the VAXELN message passing capability with VMS Operating System software.

With VAX RTA and the VAXELN Toolkit, users develop realtime applications that can be distributed between the VMS host processor and the VAXELN-based KA800 processors.

VAX RTA enables the VMS host processor to control the VAXELN realtime processors using either program control or through a command language interface. VAXELN-based KA800 processors communicate with the VMS host and each other at DMA speeds over the the VAXBI bus. Communication between processors occurs via standard VAXELN message passing services and the VAX RTA runtime library procedures.

VAX RTA runs on the VMS Operating System and supports the KA800 realtime processor running VAXELN.

### Features

VAX RTA improves overall system performance by putting the computing power closer to the realtime event that is being controlled or monitored. This can reduce interrupt overhead and increase the predictability of time critical operations.

The impact of an intensive operation on the VMS host system can be reduced and even eliminated by distributing realtime data handling to dedicated VAXELN VAX RTA processors.

Communication between processors occurs using high speed DMA transfers. VAX RTA communication services are the same for both VMS and VAXELN applications. VAXELN ports, messages, and the local name service are implemented under VAX RTA.

Each realtime processor has its own local memory for the application program, increasing available memory for the VMS system and increasing the performance of the realtime processor.

Realtime applications are developed and debugged using the standard VAXELN Toolkit. VAXELN applications, including device drivers, can be developed entirely in a high level language.

## HARDWARE REQUIREMENTS

VAX configuration as specified in the System Support Addendum (SSA 29.43.02-x).

## SOFTWARE REQUIREMENTS*

*Operating System*

VMS Operating System

*Layered Products*

VAXELN Toolkit

A VAXELN Toolkit is required to develop a VAX RTA application.

* Refer to the System Support Addendum (SSA 29.43.02-x) for availability and the required version of prerequisite/optional software.

## ORDERING INFORMATION

Software Licenses: QL-VJNA*-**
Software Media: QA-VJNA*-**
Software Documentation: QA-VJNAA-GZ
Software Product Services: QT-VJNA*-**

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

## SOFTWARE LICENSING

A VAXELN Runtime License is included with each KA800 VAX RTA processor.

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 product supports the VMS License Management Facility (LMF). License units for this 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.

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