

Software Product Description

PRODUCT NAME: **VAX DECscan VMS Software Toolkit,
Version 2.1**

SPD 26.98.02

DESCRIPTION

The VAX DECscan VMS Toolkit is a software product used as an industrial application platform. It provides data acquisition, alarm detection with controlling actions and reporting, action sets (sequence control), closed loop regulatory control, and an external utility interface. This software package supports the I/O products of the following I/O vendors, and treats the logical I/O point "tags" in a device-independent fashion.

- Honeywell (Honeywell MicroSwitch, BITBUS compatible devices) - The support software for this device is included in the kit.
- Phoenix™ (Phoenix Interbus-C, BITBUS compatible devices) - The support software for this device is included in the kit.
- Computer Products (CPI RTP, BITBUS compatible devices) - The support software (BITBUS Starting Point RTP IOV Package) for this device is included with the BITBUS Starting Point RTP Hardware Configuration.

Please contact your nearest CSS sales specialist for information regarding additional I/O vendor support.

The MENU-DRIVEN INTERACTIVE UTILITY provides the primary user interface to define and configure the application. It supports the following features:

- Easy on-line definition and configuration of the device-independent I/O point tags, alarms (and their controlling actions), action sets, and closed-loop controls
- I/O vendor specific prompts (and detailed HELP) for the definition of the I/O point tags
- On-line monitoring of the DECscan Toolkit operation and status
- On-line control of the alarms, control loops, and data acquisition
- On-line forcing of output type I/O point tags
- Real-time operator display of field I/O values in pre-converted engineering units

- Complete time-stamped configuration lists of current database definitions
- Full DECnet support of all of the above features - For example, these features are supported for tags defined in the database of a DECscan Toolkit running on a different DECnet node

The RUN-TIME TASK does the actual processing of the DECscan Toolkit functions and offers the following features:

- Operation is based around an in-memory database which contains the DECscan Toolkit I/O point data (real-time I/O values) and all the user-defined information used in controlling the Toolkit application functions
- The processing of the data acquisition (scanning on individual nodes), alarms, action sets and controls is fully configurable; for example, this processing can be:
 - Performed periodically (the default)
 - Controlled by application programs
 - Triggered by external events
 - Triggered by date and time-of-day
 - Triggered by alarm conditions
 - Triggered by current I/O values
 - Controlled by the controlling actions of other alarms, action sets, and control loops
- The "controlling actions" connected to alarms and action sets may contain any combination (and any number) of the following actions:
 - Force a value to an I/O tag
 - Activate/deactivate an alarm, control loop, action sets
 - Invoke a procedure in a separate application program, with parameter passing
 - Process a user-specified mathematical/logical expression which also support conditional and repetitive statements

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- Transfer I/O values across tags
- Initiate the scanning of all I/O tags on a "node" (e.g. a BITBUS node on a BITBUS network spawned from the DECscan BITBUS controller)
- Wait for a specified amount of time before processing the next action in the list

The DECscan Toolkit CALLABLE ROUTINES provide the primary user interface at run-time. These routines are invoked by user-written application programs to monitor and control the status and operation of the Toolkit. They allow the application programs to:

- Obtain the latest values of I/O tags
- Force new values to output type I/O tags
- Control the execution of pre-configured alarms, control loops, and action sets
- Interface database values to other VMS utilities
- Perform all of the above features on DECscan Toolkit databases of other DECnet nodes

The POINT LOGGING Utility provides for the periodic logging of I/O values on terminals and in files. This utility can be used to provide historical data to other VMS utilities, or simply to track I/O point values in real time. Several such sessions can be run in parallel, each with its own set of tags to log. Finally, all I/O values are time-stamped.

The GRAPHICS INTERFACE routines provide the complete interface between the real time I/O data of the Toolkit's database to the DataViews™ (DV-Draw and DV-Tools) industrial graphics package, sold by V.I. Corporation. The routines provided will automatically accumulate the list of I/O tags referenced in the views generated by DV-Draw. They will then periodically read the latest I/O values of those tags and update the appropriate pictures on your graphics screens.

Typical applications for the Toolkit include factory floor monitoring and automation, remote high-speed data acquisition and control, product handling, environmental control, etc. In such applications, the Toolkit allows the customer to set-up the monitoring and control activity with no coding required. Application specific requirements, such as data archival and custom graphic displays, require customer programming and/or separate utilities.

HARDWARE REQUIREMENTS

VAX, MicroVAX or VAXstation configuration as specified in the System Support Addendum (SSA 26.98.02-x).

In addition, the following Q-bus controller for communications to the I/O Vendor hardware is required:

- IBQ01 DECscan (BITBUS) controller board - Supports communications to the BITBUS compatible Honeywell MicroSwitch and Phoenix INTERBUS-C I/O devices.

SOFTWARE REQUIREMENTS*

VMS Operating System

- * Refer to the System Support Addendum for availability and required versions of prerequisite/optional software (SSA 26.98.02-x).

ORDERING INFORMATION

Software Licenses: QL-VCSA*-**
Software Media: QA-VCSA*-**
Software Documentation: QA-VCSAA-GZ
Software Product Services: QT-VCSA*-**

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

SOFTWARE LICENSING

This software is furnished under the licensing provisions of DIGITAL'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 support 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 Facility manual of the VMS Operating System documentation set.

For more information about DIGITAL's licensing terms and policies, contact your local DIGITAL office.

SOFTWARE PRODUCT SERVICES

A variety of service options are available from DIGITAL. 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.

™ DataViews is a trademark of V.I. Corporation.

System Support Addendum

PRODUCT NAME: **VAX DECscan VMS Software Toolkit, Version 2.1**

SSA 26.98.02-B

HARDWARE REQUIREMENTS

Processor Support

VAX: VAX 6000 Model 200 Series, VAX 6000 Model 300 Series, VAX 6000 Model 400 Series, 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 8842, VAX 8974, VAX 8978

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

MicroVAX: MicroVAX II, MicroVAX 2000, MicroVAX 3300, MicroVAX 3400, MicroVAX 3500, MicroVAX 3600, MicroVAX 3800, MicroVAX 3900

VAXstation: VAXstation II, VAXstation 2000, VAXstation 3100, VAXstation 3200, VAXstation 3500, VAXstation 8000

Processors Not Supported

MicroVAX I, VAXstation I, VAX-11/725, VAX-11/730, VAX-11/782, VAXserver 3500, VAXserver 3600, VAXserver 3602

Block Space Requirements (Block Cluster Size = 1):

Disk space required for installation: 6,600 blocks
(3,300K bytes)

Disk space required for use (permanent): 3,300 blocks
(1,650K bytes)

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

The following Q-bus controller for communications to the I/O Vendor hardware is required:

- IBQ01 DECscan (BITBUS) controller board - Supports communications to the BITBUS compatible Honeywell MicroSwitch and Phoenix INTERBUS-C™ I/O devices.

™INTERBUS-C is a trademark of Phoenix Limited.

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

SOFTWARE REQUIREMENTS

VMS Operating System V5.0 - V5.2

VMS Tailoring

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

- VMS Required Saveset
- Network Support
- Programming Support
- Secure User's Environment
- Utilities
- System Programming

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

OPTIONAL SOFTWARE

VAX Ada V1.5
VAX BASIC V3.2 - V3.3
VAX BLISS-32 Implementation Language V4.4 - V4.5
VAX C V2.4
VAX FORTRAN V4.8 - V5.1
VAX PASCAL V3.7 - V3.8
VAX PL/1 V3.1 - V3.2
VAX DECscan VMS and ELN BITBUS Drivers (VMS Driver only) V1.0 - V2.0

The BITBUS Starting Point RTP IOV Package V1.0 is sold by Computer Products Incorporated:

Computer Products Incorporated
Measurement and Control Division
2900 Gateway Drive
Pompano Beach, Florida 33069-4378
Telephone: (305) 974-5500
FAX: (305) 979-7371

DIGITAL does not sell nor technically support the BITBUS Starting Point RTP IOV Package.

The Dataviews (DV-Tools and DV-Draw) package V5.0 and V6.0 is sold by:

V.I. Corporation
160 Old Farm Road
Amherst, MA 01002
Telephone: (413) 253-3482

DIGITAL does not sell nor technically support Dataviews.

GROWTH CONSIDERATIONS

The minimum hardware/software requirements for any

future version of this product may be different from the minimum requirements for the current version.

DISTRIBUTION MEDIA

Disk: RX33 Floppy Diskette

Tape: 9-track 1600 BPI Magtape (PE), TK50 Streaming Tape

ORDERING INFORMATION

Software Licenses: QL-VCSA*-.**

Software Media: QA-VCSA*-.**

Software Documentation: QA-VCSAA-GZ

Software Product Services: QT-VCSA*-.**

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