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Software Product Description

PRODUCT NAME: DECosap/H1 Version 3.1 (DIGITAL Omni Services for SINEC Automation Protocols /SINEC H1 Services) **SPD 47.95.05**

DESCRIPTION

DECosap is a network communication product. It provides a solution to connect DIGITAL applications with shop floor devices based on Siemens® SINEC® H1 communication protocol. SINEC H1 services are also identified as PG communication services in Siemens literature.

Siemens SINEC H1 has been recommended for connecting PLCs and host computers on large configurations. It has been specified on top of the ISO/OSI Transport Layer and it is based on Ethernet to improve effectiveness (through higher performance) and efficiency (through lower costs per connection).

DECosap/H1 fully supports the SINEC H1 communication protocol.

Features

As the SINEC H1 communication protocol is defined on top of the ISO OSI Transport Layer, DECosap relies upon DECnet/OSI to complete the communication stack. For more information, refer to the DECnet/OSI *Software Product Description* (SPD 41.92.xx).

Because of the functional compatibility between Siemens SINEC AP and MMS (Manufacturing Messaging Services), ISO International Standard 9506, Parts 1 and 2, DECosap is integrated with the software architecture of the DEComni API product to supply the Application Programming Interface (API). For more information, refer to the DEComni API *Software Product Description* (SPD 47.88.xx).

DECosap also provides Device Access Software (DAS) for connecting Siemens SINEC H1 devices for BASEstar Open Server systems. For further information, refer to the DEComni API *Software Product Description* (SPD 47.82.xx).

Components

- DECosap/H1 Services

This component adds support for SINEC H1 functionality via the DEComni API. Supported services are listed at the end of this *Software Product Description* and are divided into the following categories:

  — Environmental Management

  — Messages

  — Device Management

  — Variable Access

- Configuration and Management Facilities

DECosap/H1 uses the DEComni API facility ODSCL.

On OpenVMS platforms, the following DEComni API facilities are supported:

  — ODF (Omni Definition Facility)

  — OmniView

- Support for the Device Access Services of BASEstar Open
- Installation Verification Procedure (IVP)

The DECosap IVP performs a series of tests to verify proper installation.

Documentation

DECosap includes the following documentation:

- A platform-specific Network Manager's and Programmer's Guide provides an overview of SINEC H1 and SINEC AP (see the DECosap/AP *Software Product Description*—SPD 47.96.05) concepts and terminology. It includes a description of the services that are available through DEComni API and features of DECosap. It also describes how to use the DEComni API utility ODSCL.
- A platform-specific Installation Guide that explains how to prepare for installation, how to install the product, and what to do after DECosap is installed.

INSTALLATION

Before attempting to install the software, the customer must have all pre-requisite hardware and software. Digital Equipment Corporation recommends that a customer's first purchase include DIGITAL Installation Services.

Connectivity to all other nodes within the network is the responsibility of the customer.

SUPPORTED VERSIONS

This SPD covers the following versions of the DECosap product:

- DECosap/H1 for OpenVMS VAX
- DECosap/H1 for OpenVMS Alpha
- DECosap/H1 for DIGITAL UNIX

ORDERING INFORMATION

DECosap/H1 for OpenVMS VAX:

The DECosap/AP product kit is included in the BASEstar Open Server for OpenVMS VAX Consolidated Software Distribution:

Software Media: QA-5SRAC-H8

Software Licenses (unlimited use): QL-5BQ**-**
Software Documentation: QA-5BP**-**
Software Product Services: QT-5BR**-**

DECosap/H1 for OpenVMS Alpha:

The DECosap/AP product kit is included in the BASEstar Open Server for OpenVMS Alpha Consolidated Software Distribution:

Software Media: QA-5SRAB-H8

Software Licenses (unlimited use): QL-2XWA*-**
Software Documentation: QA-2XVAA-GZ
Software Product Services: QT-2XWA*-**

DECosap/H1 for DIGITAL UNIX:

The DECosap/AP product kit is included in the BASEstar Open Server for DIGITAL UNIX Consolidated Software Distribution:

Software Media: QA-5SRAA-H8

Software Licenses (unlimited use): QL-0Z7A*-**
Software Documentation: QA-0Z7A*-GZ
Software Product Services: QT-0Z7A*-**

* 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 Equipment Corporation's Standard Terms and Conditions. For more information about DIGITAL licensing terms and policies, contact your local DIGITAL office.

License Management Facility Support:

This layered product supports the DIGITAL License Management Facility.

Two types of license are available:

- ''Unlimited system use'' license–available for a processor
- ''Concurrent use'' license–available for a device connection.

SOFTWARE PRODUCT SERVICES

A variety of service options are available from DIGITAL. For more information, contact your local DIGITAL office.

SOFTWARE WARRANTY

This software is provided by DIGITAL with a 90 day conformance warranty in accordance with the DIGITAL warranty terms applicable to the license purchase.

Warranty Limitations

The SINEC H1 services supported by DECosap/H1 are listed in Appendix A of the System Warranty Addendum of this SPD.

HARDWARE REQUIREMENTS

Processors Supported:

- Alpha processors supporting either:
  - — OpenVMS Alpha Version 6.1 to 7.1
  - — DIGITAL UNIX Version 3.2 or 4.0
- VAX processors supporting:
  - — OpenVMS VAX Version 6.1 to 7.1

DISK SPACE REQUIREMENTS

OpenVMS (VAX/Alpha):

- 26 Mb (installation)
- 10 Mb (permanent use)

DIGITAL UNIX:

- 26 Mb (installation)
- 10 Mb (permanent use)

Note: A configuration with at least 16 Mb of memory is recommended.

These values 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

DECosap/H1 for OpenVMS Alpha:

- OpenVMS Version 6.1 to 7.1
- DECnet/OSI for OpenVMS Alpha Version 6.3 to 7.1
- Either:
  - — DEComni API for OpenVMS Alpha V3.1, or
  - — BASEstar Open Server for OpenVMS Alpha V3.1
- ORACLE Rdb Version 6.0 or 6.1[1]
- OpenVMS DECwindows Motif Version 1.2[2]

DECosap/H1 for OpenVMS VAX:

- OpenVMS VAX Version 6.1 to 7.1
- DECnet/OSI for OpenVMS VAX Version 6.3 to 7.1
- Either:
  - — DEComni API for OpenVMS VAX V3.1, or
  - — BASEstar Open Server for OpenVMS VAX V3.1
- ORACLE Rdb Version 5.1[1]
- OpenVMS DECwindows Motif Version 1.2[2]

DECosap/H1 for DIGITAL UNIX:

- DIGITAL UNIX Version 3.2 or 4.0
- DECnet/OSI for DIGITAL UNIX Version 3.2 to 4.0
- Either:
  - — DEComni API for DIGITAL UNIX V3.1
  - — BASEstar Open Server for DIGITAL UNIX V3.1

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

This product is available on CD-ROM for the supported operating system, and on TK50 media for OpenVMS VAX.

[1] Only necessary if you are using DEComni API with the ODF component.

[2] Only necessary if you are using DEComni API with the OmniView component.

APPENDIX A - SINEC H1 Functionality Cross Reference Tables

The tables that follow list the Conformance Building Block (CBB) services and parameters that are supported by DECosap/H1 Version 3.1. They are compared to the services provided within the first version. The level of support depends upon the level of functionality provided by the target Siemens communication processors.

Table 1
Siemens SINEC H1 CBB Services Cross Reference Table

	DECosap/H1 Version 3.1	CP535
Environment Management		
Initiate	B	B
Conclude	B	B
Abort	B	B
Cancel	C	N
VMD Support		
Status	C	S
Variable Access Services		
Read	B	B
Write	B	B
InformationReport	B	B
Domain Management Services		
InitiateDownload Sequence	C	S
DownloadSegment	C	S
TerminateDownload Sequence	C	S
InitiateUpload Sequence	C	S
UploadSegment	C	S
TerminateUpload Sequence	C	S
Program Invocation Services		
Start	C	S
Stop	C	S
Serial Transfer Services		
Send	B	B

Where the following symbols apply:

B = Client and Server
C = Client only
S = Server only
N = Not supported

Table 2
Siemens SINEC H1 CBB Parameters Cross Reference Table

Parameters	DECosap/H1 Version 3.1
STR1	TRUE
STR2	TRUE
NEST	10
VNAM	FALSE
VADR	TRUE
VALT	FALSE
VSCA	FALSE
TPY	FALSE
VLIS	FALSE
REAL	FALSE
AKEC	FALSE
CEI	FALSE

Supported Siemens Communication Processors (CP) are:

- CP535 for Simatic® S5 PLC family
- CP143 for Simadyn® S5 PLC family
- CP1430 for Simatic® S5 PLC family
- CSH1 for Simadyn® PLC family

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