



Software Product Description

PRODUCT NAME: DECosap/AP Version 3.1 **SPD 47.96.05**
**(DIGITAL Omni Services for SINEC Automation Protocols
/SINEC AP Services)**

DESCRIPTION

DECosap/AP is a network communication product. It provides a solution to connect DIGITAL applications with shop floor devices based on Siemens® SINEC® Automation Protocol (AP) communication protocol. Although mainly oriented to the manufacturing environment, SINEC AP addresses generic applications and is intended to provide a common communication method between different Siemens automation devices— Programmable Logic Controllers (PLCs), numeric control machines, robots, personal computers and minicomputers.

Siemens SINEC AP is layered on top of the SINEC H1 network and provides proprietary Session, Presentation, and Application layers. The result offers an integrated Siemens Level 1 solution with an associated value of a consistent and uniform view to the plant floor applications.

DECosap/AP fully supports the SINEC AP communication protocol.

Features

DECosap/AP provides the support for SINEC AP Application, Presentation, and Session layers. As this communication protocol is defined on top of the ISO OSI Transport Layer, DECosap/AP 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).

Components

- DECosap/AP Services

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

Environmental Management, VMD Support, Variable Access, Serial Transfer, Program Invocation, and Domain Services.

- Configuration and Management Facilities
DECosap/AP 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/AP includes the following documentation:

- A platform-specific Network Manager's and Programmer's Guide that provides an overview of SINEC H1 (see the DECosap/AP *Software Product Description*— SPD 47.95.05) and SINEC AP concepts and terminology. It includes a description of the services that are available through DEComni API and features of DECosap. It also describes the use of 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/AP and DECosap/H1 for OpenVMS VAX
- DECosap/AP and DECosap/H1 for OpenVMS Alpha
- DECosap/AP and DECosap/H1 for DIGITAL UNIX

ORDERING INFORMATION

DECosap/AP 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-5BP**-**

Software Documentation: QA-5BP**-**

Software Product Services: QT-5BQ**-**

DECosap/AP 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-2XVA*-**

Software Documentation: QA-2XVAA-GZ

Software Product Services: QT-2XVA*-**

DECosap/AP 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-0Z8A*-**

Software Documentation: QA-0Z8A*-GZ

Software Product Services: QT-0Z8A*-**

* 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 the 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 (not available with OpenVMS VAX)

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

DIGITAL has developed this product according to SINEC AP Protocol Specification produced by Siemens. Not all Siemens Communication Processors (CP) support the full range of SINEC AP services. The services supported by each CP are listed at the end of this document. To minimize the risk of interworking problems, DIGITAL has tested this product against selected Siemens devices to prove interoperability.

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 Alpha:

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

OpenVMS VAX:

- 40 Mb (installation)
- 18 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/AP for OpenVMS Alpha:

- OpenVMS Alpha Version 6.1 to 7.1
- DECnet/OSI for OpenVMS Alpha Version 6.3 to 7.1
- Either:
 - DEComni API V3.1 for OpenVMS Alpha, or
 - BASEstar Open Server V3.1 for OpenVMS Alpha
- ORACLE Rdb Version 5.1¹
- OpenVMS DECwindows Motif Version 1.2²

DECosap/AP 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 6.0 or 6.1¹
- OpenVMS DECwindows Motif Version 1.2²

DECosap/AP for DIGITAL UNIX:

- DIGITAL UNIX Version 3.2 or 4.0
- Either:
 - DEComni API V3.1 for DIGITAL UNIX, or
 - BASEstar Open Server V3.1 for DIGITAL UNIX

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 AP Functionality Cross Reference Tables

The following tables list the Conformance Building Block (CBB) services and parameters that are supported by DECosap/AP 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 AP CBB Services Cross Reference Table

	DECosap /AP Ver- sion 3.1	CP143	CP231A CP231B	CP141	KS100
Environment Management					
Initiate	B	B	N	B	N
Conclude	B	B	N	B	N
Abort	B	B	N	N	N
Cancel	C	N	N	N	N
VMD Support Services					
Status	B	B	N	B	N
GetNameList	C	S	N	B	N
Identify	B	B	N	B	N
GetCapabilityList	C	S	N	B	N
UnsolicitedStatus	B	B	N	B	N
Variable Access Services					
Read	B	B	N	B	N
Write	B	B	N	B	N
InformationReport	B	B	N	B	N
GetVariableAccessAttributes	C	S	N	B	N
Domain Management Services					
InitiateDownloadSequence	C	S	N	C	N
DownloadSegment	C	S	N	C	N
TerminateDownloadSequence	C	S	N	C	N
InitiateUploadSequence	C	S	N	C	N
UploadSegment	C	S	N	C	N
TerminateUploadSequence	C	S	N	C	N
RequestDomainDownload	C	S	N	C	N
RequestDomainUpload	C	S	N	C	N
LoadDomainContent	N	S	N	C	N
StoreDomainContent	N	S	N	C	N
DeleteDomain	C	S	N	C	N
GetDomainAttributes	C	S	N	C	N

Table 1 (Cont.)
Siemens SINEC AP CBB Services Cross Reference Table

	DECosap /AP Ver- sion 3.1	CP143	CP231A CP231B	CP141	KS100
Program Invocation Services					
CreateProgramInvocation	C	B	N	N	N
DeleteProgramInvocation	C	B	N	N	N
Start	C	B	N	N	N
Stop	C	B	N	N	N
Resume	C	B	N	N	N
Reset	C	B	N	N	N
Kill	C	B	N	N	N
GetProgramInvocationAttributes	C	B	N	N	N
Serial Transfer Services					
Read	B	B	B	B	B
Write	B	B	B	B	B
Send	B	B	B	B	B
Exchange	B	B	B	B	B

Where the following symbols apply:

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

Table 2
Siemens SINEC AP CBB Parameters Cross Reference Table

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

Supported Siemens Communication Processors (CP) are:

- CP143: for Simatic® S5 PLC family
- CP231A/B: for Sinumerik NC 800 and Sirotec Robot Controllers
- CP141, CP1412, CP1413: for Sicomp PC 32-xx (PC AT® Compatible)
- KS100: for Sicomp M70 (with IOSY-H1 software providing SINEC AP)

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