CADENCE SPB RELEASE 16.5 README for System-in-Package (SiP) and Allegro Package Designer Products

This document provides detailed information for the System-in-Package (SiP) and Allegro Package Designer (APD) products. Refer to the *Cadence SPB Release 16.5 Readme* for general release information.

SiP/Allegro Package Designer Product Compatibility Information

The System-in-Package (SiP), Allegro Package Designer (APD) and Cadence 3D Design Viewer products are installed from the Cadence SPB/OrCAD 16.5 Install DVD. The Cadence IO Planner product, used for concurrent co-design, is based on Encounter Digital Implementation (EDI) Systems technology and installed from the EDI Systems CD ROM image. Both the Cadence SPB/OrCAD 16.5 Install DVD and the EDI Systems CD ROM images contain versions of the OpenAccess (OA) software.

Virtuoso SiP Architect XL provides an integrated flow with the Virtuoso Floorplan, Layout, and Simulation environment. Virtuoso products are installed from the Virtuoso (IC) CD ROM image.

For SPB 16.5, the compatibility of Cadence SiP and APD products with OA, EDI Systems and Virtuoso is described below.

Product Compatibility Details

Product name	Version
EDI Systems	EDI Systems 10.1.1
OA	OA22.04.073
Virtuoso (OA database)	IC6.1.4.500.11
Virtuoso (CDBA database)	IC5.1.41 USR6 (Linux only)
MMSIM	MMSIM 07.11.x

NOTE: To be able to use the Cadence IO Planner, you must install the EDI Systems CD ROM image.

SiP 16.5 Computing Platform Support Matrix

The following table presents the supported operating systems for the SiP, APD and Cadence 3D Design Viewer products. For additional information on system requirements, see the *Allegro Platform System Requirements* document.

Computing Platform Support for SiP 16.5 SiP/APD Products

Product name	Win XP Pro SP3	Windows 7	2008 R2 Server	Vista	Solaris 10 sunv4	Linux RHEL 4.7	Linux RHEL 5.2	AIX 5.3	AIX 6.1
Cadence SiP Digital Architect XL SIP110	Y	Y	Y	Y	Y	Y	Y	N	N
Cadence SiP Digital Architect GXL SIP125	N	N	N	N	Y	Y	Y	N	N
Cadence SiP Digital SI XL SIP215	Y	Y	Y	Y	Y	Y	Y	N	N
Cadence SiP Layout XL SIP225	Y	Y	Y	Y	Y	Y	Y	N	N
Virtuoso SiP Architect XL SIP410	N	N	N	N	Y	Y	Y	N	N
Cadence Chip Integration Option SIP625	Y	Y	Y	Y	Y	Y	Y	N	N
Allegro Package Designer L PX4100	Y	Y	Y	Y	Y	Y	Y	Y	Y
Allegro Package SI L PA7625	Y	Y	Y	Y	Y	Y	Y	Y	Y
Allegro Design Publisher XL PA1220	Y	Y	Y	Y	Y	Y	Y	N	N
Cadence 3D Design Viewer PA6605	Y	Y	Y	Y	Y	Y	Y	N	N
Distributed Co-Design Option SIP630	Y	Y	Y	Y	Y	Y	Y	N	N

NOTES:

(1) SiP/Packaging products are not supported on these platforms: Solaris 10 x86, Linux SLES 10, Vista Home Basic.
(2) Spectre Circuit Simulator is not supported on Windows platforms.
(3) Cadence IO Planner is not supported on Windows or AIX platforms.
(4) There may be additional platform limitations depending on the version of Virtuoso that you are running. Refer to Cadence Online Support for Virtuoso Computing Platforms.
(5) Allegro Package SI L (PA7625), Cadence SiP Digital SI XL (SIP215), and Cadence SiP Digital Architect GXL (SIP125) all require a third-party product (PakSi-E) acquired from Apache Design Solutions. Please check http://www.apache-da.com/ for platform information.

SiP/Cadence IO Planner/OA Installation and Setup

For SiP concurrent co-design, SiP Layout, Cadence IO Planner, and OA software must be installed.

The SiP products are installed from the Cadence SPB/OrCAD 16.5 Install DVD. The Cadence IO Planner is part of EDI Systems technology and installed from the EDI Systems CD ROM image. For Cadence IO Planner, install either the Encounter Digital Implementation Systems L (EDS100) or Encounter Digital Implementation Systems XL (EDS200) product.

OpenAccess (OA) software is available on both the SPB and EDI Systems CD ROM images.
OpenAccess version 22.04.073 is installed under <cadence_install_dir>/oa_v22.04.073 when you install any of the following SPB 16.5 products/options:

- SIP125 Cadence SiP Digital Architect GXL
- SIP625 Cadence Chip Integration Option
- SIP225 Cadence SiP Layout XL

Refer to the *OpenAccess Configuration Guide* included in the Cadence product documentation for information that will help you successfully complete the OA installation. This document also describes the additional setup required to run the OA utilities standalone.

To configure the latest version of OA:

1. Install the EDI Systems software.
   (Be sure you install it in a different hierarchy than any other version you have on your system.)
2. Install the SPB software.

NOTE: The order in which you install the EDI Systems or SPB software does not matter.

3. Before running the Cadence IO Planner, set the following:

```
setenv ENCOUNTER <path to your EDI Systems installation>
setenv PATH ${ENCOUNTER}/bin:${PATH}
encounter -version
echo "OA Version is" oaGetVersion
```

SPB and EDI Systems software may contain different embedded builds of OA. You can see different versions listed by oaGetVersion depending on the order in which you have the SPB and EDI Systems bin directories listed in your PATH environment variable. SiP Layout and Cadence I/O Planner will each use its own embedded build of OA and will be able to read/write data when working together in the IC/ Package co-design flow (as they are both based on OA Data Model 4).

Note: If you use custom batch files or scripts to set up the SPB environment, add the following to the path. Some Allegro products may not launch without this setting.
`%CDSROOT%\OpenAccess\bin\win32\opt`

SPB 16.5 SiP/Cadence IO Planner Interoperability

The following table describes the versions of SiP and Cadence IO Planner validated by Cadence.

SiP/Cadence IO Planner Interoperability

SiP Version	Cadence IO Planner Version	OA Version
SPB16.50.000 Base	EDI10.11.000	OA 22.04.073
SPB16.50.000 Base	EDI10.10.000	OA 22.04.073
SPB16.30.021 Hotfix	EDI09.13.000	OA 22.04.068
SPB16.30.014 Hotfix	EDI09.12.000	OA 22.04.061
SPB16.30.007 Hotfix	EDI09.11.000	OA 22.04.058
SPB16.30.001 Hotfix	EDI09.10.000	OA 22.04.052
SPB16.20.026 Hotfix	SOC08.10.004	OA 22.04.044
SPB16.20.019 Hotfix	SOC08.10.002	OA 22.04.044
SPB16.20.011 Hotfix	SOC08.10.001	OA 22.04.037
SPB16.20.006 Hotfix	SOC08.10.000	OA 22.04.032
SPB16.20.008 Hotfix	SOC07.10.003	OA 22.04.026
SPB16.20.000 Base	SOC07.10.002	OA 22.04.017

Virtuoso SIP Architect Installation and Setup

Virtuoso Analog Design Environment (ADE) and Virtuoso Schematic Editor must be installed as part of the Virtuoso SiP Architect XL integrated solution. Licenses required for IC 6.1.4 and IC 5.1.41 with SPB 16.5 are as follows:

Virtuoso SIP Architect on IC 6.1.4 (OA) Release and SPB 16.5		
SPB Licenses	SiP410	Virtuoso SiP Architect XL
	SiP225	Cadence SiP Layout XL
	SiP625	Cadence Chip Integration Option
	SiP630	Distributed Co-Design Option
Virtuoso Licenses	95100	Virtuoso® Schematic Editor L
	95200	Virtuoso® Analog Design Environment L
	38500	Virtuoso® Spectre® Simulator (with MMSIM 7.0.x or later release)
	95300	Virtuoso_Layout_Suite_L

Virtuoso SIP Architect on IC 5.1.41 (CDBA) Release and SPB 16.5		
SPB Licenses	SiP410	Virtuoso SiP Architect XL
	SiP225	Cadence SiP Layout XL
	SiP625	Cadence Chip Integration Option
	SiP630	Distributed Co_Design Option
Virtuoso Licenses	34500	Virtuoso® Schematic Editor
	34510	Virtuoso® Analog Design Environment
	32500	Virtuoso® Spectre® Simulator
	300	Virtuoso® Layout Editor

Set the following paths if using Virtuoso IC 6.1.4 (OA database):

```
set path = (
$ICHIER/tools/bin
$ICHIER/tools/dfII/bin
$PCBHIER/tools/dfII/bin
$PCBHIER/tools/pcb/bin
$MMSIMHIER/tools/bin
$PCBHIER/tools/bin
$PCBHIER/tools/fet/bin
)
where
PCBHIER is SPB16.5 installation
ICHIER is IC614 installation
MMSIMHIER is MMSIM7.11.x installation (optional)
```

Set the following paths if using Virtuoso IC 5.1.41 (CDBA database):

```
set path = (
$ICHIER/tools/bin
$ICHIER/tools/dfII/bin
$PCBHIER/tools/dfII/bin
$PCBHIER/tools/pcb/bin
$PCBHIER/tools/bin
$PCBHIER/tools/fet/bin
)
where
PCBHIER is SPB16.5 installation
ICHIER is IC5141 installation
```

To run Virtuoso SiP Architect, run *rfwb*

Symbol Library and Padstacks

All library symbols created with previous releases of Allegro Package Designer (APD) and SiP are compatible with this release. Before loading the generic library, be sure that customized component symbols are not in the same directory in which you load the release.

The library is overwritten when you load the generic library. The CAE libraries will not be affected. Before using any of the library symbols, carefully review them to ensure that they meet your physical design criteria.