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# Converting Non-Allegro® EDM Designs to Allegro® EDM-Compatible Designs

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# Contents

Preface . . . . . 5
About This Document . . . . . 5
Related Documentation . . . . . 5
Related Tools and Flows . . . . . 5
Typographic and Syntax Conventions . . . . . 6

1
Converting Non-Allegro EDM Designs to Allegro EDM Designs . . . . . 7

2
Design Migration . . . . . 9
Overview . . . . . 9
Pre-Migration Checks . . . . . 9
Preserving CPM Custom Variables . . . . . 9
Using the Design Migration Wizard . . . . . 11
After Design Migration . . . . . 16

A
Design Migration User Interface . . . . . 17
Overview . . . . . 17
Design Migration Wizard . . . . . 18
Project Selection . . . . . 18
Design Migration . . . . . 19

B
Standard Library Support . . . . . 21

Index . . . . . 23

# Preface

## About This Document

The *Migrating to Allegro® EDM* document explains how to convert your non-Allegro EDM design projects into Allegro EDM projects.

## Related Documentation

For information on migrating from an older release to the current release, see the *Allegro EDM (previously ADW)* section in *Migration Guide for Allegro Platform Products*.

For information on new features, see *Allegro EDM: What's New in Release*.

You can also refer to the following documents to know more about related tools and methodologies:

- To learn how to use Library Import, see *Allegro EDM Library Import User Guide*.
- To learn how to use Library Distribution, see *Allegro EDM Library Distribution User Guide*.
- To learn how to use Library Revision Manager, see *Allegro EDM Version Management Utilities User Guide*.

### Related Tools and Flows

- For information on various PCB design working environments such as a team of designers working on a Design Entry HDL project, implementing FPGAs in designs, working with high-speed constraints, importing IFF files for radio-frequency designs, and reusing existing modules, see *Allegro PCB Design Flows*.
- To learn how to create and configure Design Entry HDL projects, see the *Allegro Project Manager User Guide*.

# Typographic and Syntax Conventions

This list describes the syntax conventions used for this document:

| | |
|---|---|
| `literal` | Nonitalic words indicate keywords that you must enter literally. These keywords represent command (function, routine) or option names. |
| *`argument`* | Words in italics indicate user-defined arguments for which you must substitute a name or a value. |
| \| | Vertical bars (OR-bars) separate possible choices for a single argument. They take precedence over any other character. |
| `[ ]` | Brackets denote optional arguments. When used with OR-bars, they enclose a list of choices. You can choose one argument from the list. |
| `{ }` | Braces are used with OR-bars and enclose a list of choices. You must choose one argument from the list. |

# 1

# Converting Non-Allegro EDM Designs to Allegro EDM Designs

When you convert your non-Allegro EDM design projects to Allegro EDM projects, your existing design projects and libraries might not be compatible with Allegro EDM environment requirements.

To migrate from a non-Allegro EDM environment to Allegro EDM, you need to do the following:

1. Import the library using the Library Import utility. Refer to the *Allegro EDM Library Import User Guide* for details.
2. Distribute the libraries using the Library Distribution utility. Refer to the *Allegro EDM Library Distribution User Guide* for details.
3. Convert the designs

   See the Using the Design Migration Wizard section for information on migrating the design data.

# 2

# Design Migration

## Overview

If you are new to Allegro EDM, your existing design projects and libraries will not be compatible with Allegro EDM environment requirements. The Allegro EDM Design Migration utility enables you to convert a non-Allegro EDM project into an Allegro EDM project.

## Pre-Migration Checks

Before you run the Design Migration utility on any project, perform the following checks:

- Ensure *<PCBDW_LIB>* has all the library elements, cells, and part rows required for the design being converted. This means that you need to import and distribute the complete library available in *<PCBDW_LIB>*.
- Ensure that the library names are consistent throughout the hierarchy if the design being converted has subdesigns.
- No local parts or cells in the design are supported. If there are any such local models, import them into the component database and ensure that they are available in *<PCBDW_LIB>*.
- Ensure that the hierarchy is saved (run `hier_write` on the top design), and any reported errors are corrected.

### Preserving CPM Custom Variables

If you have directives in the project CPM file that need to be preserved in the converted project, do the following:

1. Copy `MigrateDirective.txt` from *<installation_directory>*`\adw_conf_root\@company_name@\@site_name@\cdssetup\pcbdw`

2. Paste this file in:
   *$ADW_CONF_ROOT*\@company_name@\@site_name@\cdssetup\pcbdw
3. Make the necessary changes.

*Important*

The directives that you specify in `MigrateDirective.txt` are added to the project-level CPM file only if their values are different from the directive values in the site or installation project files, that is, `site.cpm` and `cds.cpm`.

The syntax to be used:

```
<section name in CPM to be preserved> <directive_1>,<directive_2>,<directive_N>
```

### Example

If you need to preserve the following section of a project CPM file:

```
START_PKGRXL

regenerate_physical_net_name 'OFF'

electrical_constraints 'ON'

overwrite_constraints 'OFF'

END_PKGRXL
```

the corresponding entries in the `MigrateDirective.txt` file will be:

```
PKGRXL
regenerate_physical_net_name,electrical_constraints,overwrite_const
raints
```

# Using the Design Migration Wizard

If you are new to Allegro EDM, your existing design projects and libraries might not be compatible with Allegro EDM environment requirements. The Allegro EDM Design Migration wizard enables you to convert a non-Allegro EDM project into an Allegro EDM project.

### Excluding Files during Migration

When migrating from a non-Allegro EDM environment to an Allegro EDM environment, you might want to exclude certain files during the migration because you do not want to copy over the source project settings to the target environment. In such cases, you can create an `ExcludeFiles.txt` file and save it at the following location:

```
adw_conf_root\@company_name@\@site_name@\cdssetup\pcbdw\ExcludeFiles.txt
```

The path of each file to be excluded during the migration should be listed relative to the `.cpm` file in `ExcludeFiles.txt`. Each file name must be on a separate line and comments are not allowed.

For example, `ExcludeFiles.txt` can have entries such as the following:

```
atdmdir/atdm.ini

worklib\testproj\physical\testproj.brd
```

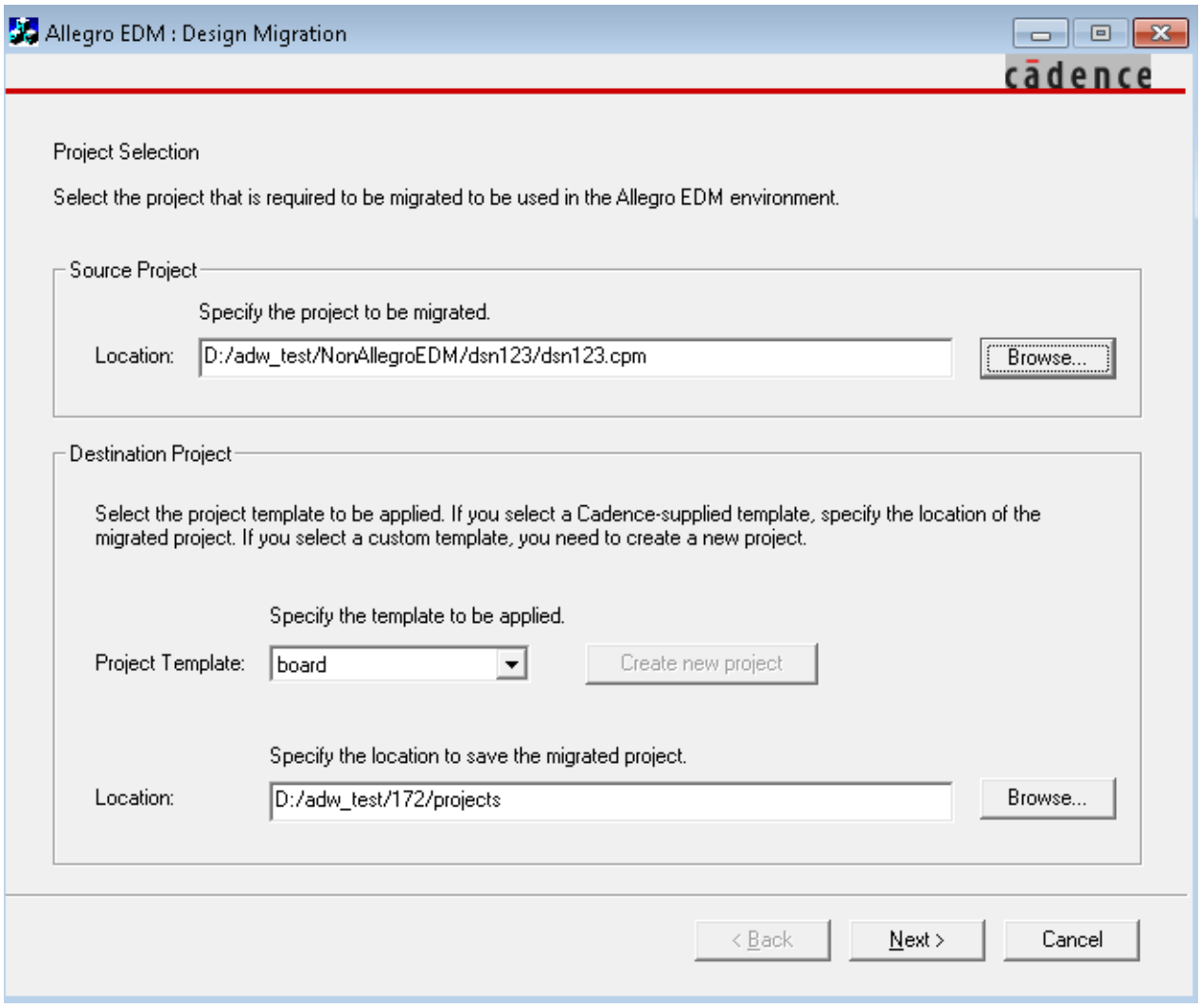
**Note:** If you specify a file in `ExcludeFiles.txt`, and a file with the same name exists in the target project (e.g., `atdm.ini`), the target file is preserved and is not overwritten with the source file.

To convert a non-Allegro EDM project into an Allegro EDM project, do the following:

1. Open the Allegro EDM system console.
2. Type `designmigration` and press `Enter`.

   The *Project Selection* wizard page appears. It allows you to specify the design to be converted and the target location where you want to create the Allegro EDM-compatible design.
3. Specify the location of the CPM file of the non-Allegro EDM project to be converted in the *Source Project* section.

You can use the *Browse* button to navigate to the folder that contains the CPM file.




4. Select the project workspace template for the converted Allegro EDM project in the *Destination Project* section.

   Depending on your installation and configuration, you might see different values for the project workspaces. The Cadence-supplied project workspaces are `board`, `board_ref`, `highspeed`, and `systemdesign`.

   - If you select any of the Cadence-supplied project workspaces, specify the location where the converted project should be saved.

     You can use the *Browse* button to select the location of the converted Allegro EDM project.

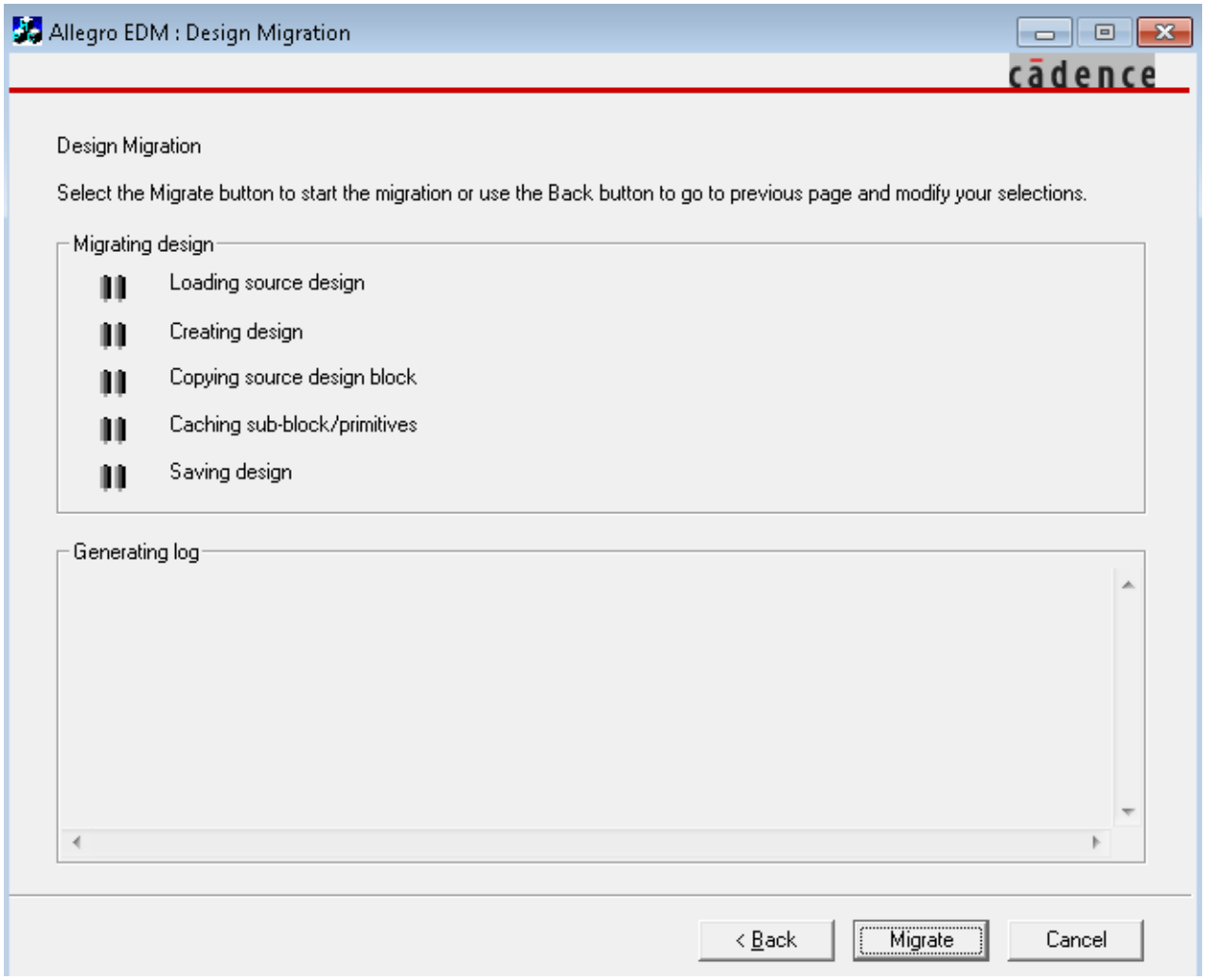
**Note:** The project name, library name, and the design name of the converted (destination) project remains the same as the source project. You cannot change these names.

- If you select a custom workspace template, the *Create new project* button is enabled, and the location field for the destination project is disabled.

  When you click the *Create new project* button, the Project Workspace Setup Wizard opens. Perform the steps in the wizard to create the new project. The location you specify for the destination project is populated in the *Location* field of the *Destination Project* section once the wizard is closed on successful creation of project.

5. Click *Next*.

   The *Design Migration* wizard page appears listing all the design migration steps.



**6.** Click *Migrate*.

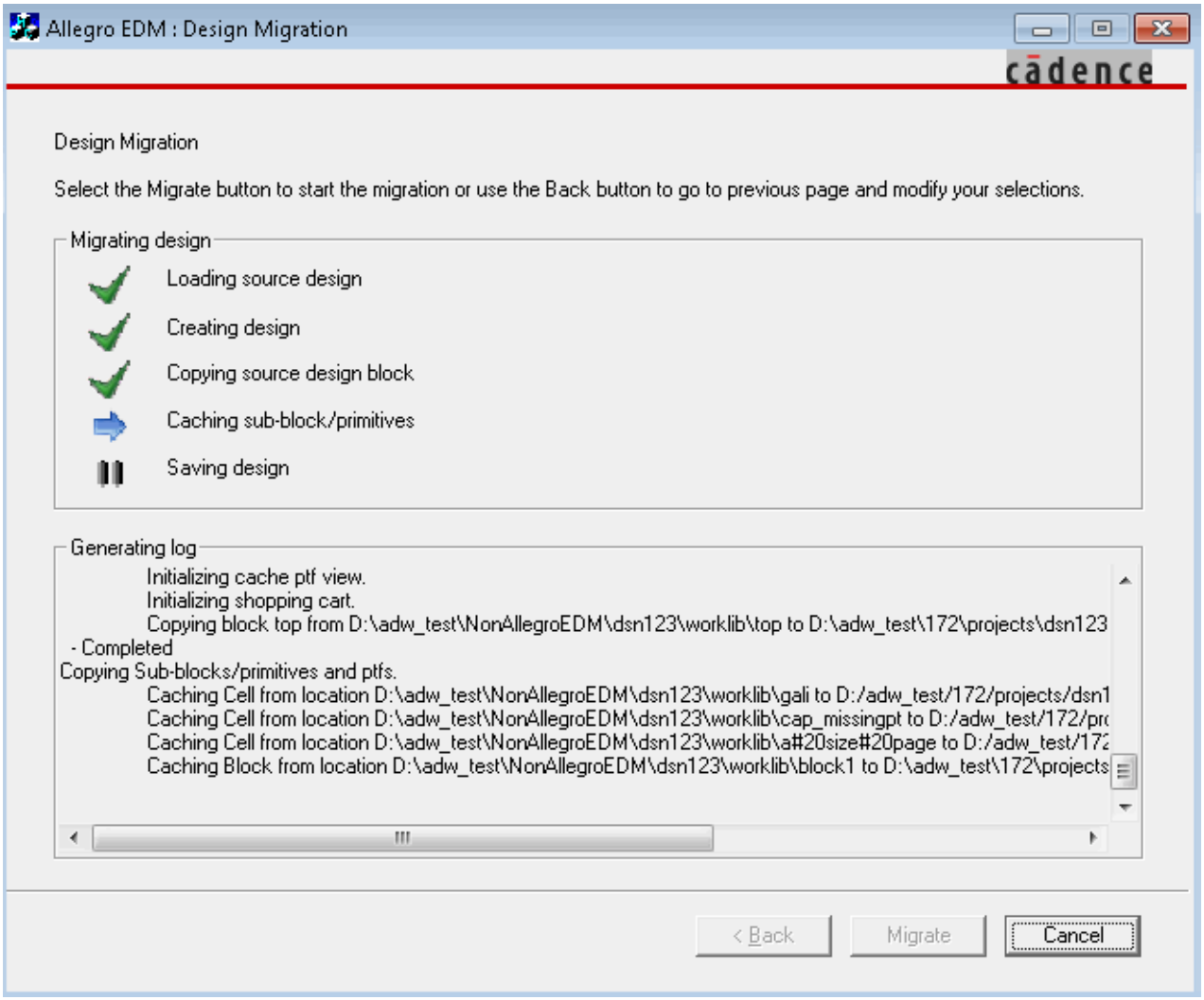
This wizard guides you through the following tasks:

| Step | Description |
|---|---|
| Loading source design | Reads the source design information |
| Creating Allegro EDM design | Creates the necessary files and directories required for an Allegro EDM-compatible project, based on the project workspace template selected. |
| Copying the source design block and Caching sub-blocks/primitives | ■ Imports the schematic data from the source design to the Allegro EDM-compatible project.<br>■ Creates the Shopping Cart for the Allegro EDM-compatible project based on the components used in your source design. |
| Saving design | Saves migration-related changes to the CPM file. |

The design migration steps run one by one. The *Generating log* section lists the following:

- ❑ summary and status of the steps as they run

- errors and warnings you encounter while running the steps




The icons and their meaning are explained in the following table.

| Icon | Description |
|---|---|
|  | Step ran successfully |
|  | Step currently running |

| Icon | Description |
|---|---|
|  | Step to be run |
|  | Step encountered errors |

7. Fix the listed errors and then run the design migration again.
8. Once you have run all the steps, click *Finish*.

   The *Design Migration* wizard exits. This completes the design migration process.

# After Design Migration

Run Library Revision Manager (LRM) to update the converted design with the latest library elements, cells, and part rows.

See the *Allegro EDM Version Management Utilities User Guide* for details on using LRM.

# A

# Design Migration User Interface

## Overview

This section explains the following screens of the Design Migration wizard:

- Project Selection
- Design Migration

# Design Migration Wizard

The Design Migration wizard contains the following dialog boxes:

## Project Selection

| Interface Element | Description |
|---|---|
| Source Project | This section lets you specify the source location of the non-Allegro EDM project, and contains the *Location* field, which displays the location of the project CPM file of the non-Allegro EDM design project. |
| Destination Project | This section lets you specify the target location for the Allegro EDM project, and contains the following fields:<br><br>*Location:* Displays the location of the converted design project.<br><br>By default, the target project directory is the one specified by the `<PCBDW_PROJECTS_DIR>` variable in the `<startworkbench>` file.<br><br>*Project Template:* Specifies the type of project workspace to be used to create the Allegro EDM project.<br><br>If you select a custom workspace template, the *Create new project* button is enabled. When you click this button, the Project Workspace Setup Wizard opens. Follow the steps in this wizard to create a new Allegro EDM project. |
| Browse | In the *Source Project* section, click this button to navigate to the non-Allegro EDM project that you want to convert into the Allegro EDM environment.<br><br>In the *Destination Project* section, click this button to specify a target location for the Allegro EDM project. |
| Back | Click this to move to a previous design migration step. |
| Next | Click this to move to the next design migration step. |
| Cancel | Click this to cancel the migration process. |

## Design Migration

| Interface Element | Description |
|---|---|
| Migrating design | This section allows you to view the steps in the migration process. |
| Generating log | This section displays the messages that indicate a successful operation for each design migration step. |
|  | This tick appears against the step that has been successfully completed. |
|  | This arrow appears against the step which is being performed in the migration process. |
|  | This symbol appears against the step which is to be performed next in the migration process. |
| Migrate | Click this button to start the design migration process. |
| Back | Click this to go back to a previous screen. |
| Cancel | Click this to cancel the design migration process. |
| Finish | Click this after running the design migration steps to finish the design migration process, and exit the wizard. |

# B

# Standard Library Support

Standard library components are supported in Allegro EDM. You can configure and import standard models in Allegro Library Manager.

1. If the existing component database already contains standalone cell models, the Allegro EDM uprev process (`adw_uprev` run while migrating to 17.2 release) converts these cell models to standard models.
2. To import new standard models, run the library import process to:
   a. Configure standard models.
   b. Run pre-analysis.
   c. Upload library data.

If you are using standard models in Allegro EDM projects, you need to migrate the design projects to manage these standard models. To do so:

1. Remove any existing references to the standard libraries from physical location and project files.
2. Modify your project workspace templates.
3. Migrate the existing designs.

# Index

## Symbols

[] in syntax 6
{} in syntax 6
| in syntax 6

## B

braces in syntax 6
brackets in syntax 6

## C

conventions
    user-defined arguments 6
    user-entered text 6

## I

italics in syntax 6

## K

keywords 6

## L

literal characters 6

## O

or-bars in syntax 6

## V

vertical bars in syntax 6