

## What is a Workspace?

Active-HDL allows you to group individual designs and resource files (source files, output files with simulation results, etc.) into the collection of projects called *Workspace*.

The Workspace allows adding and working with several projects simultaneously and plays the role of the container for Active-HDL designs. It provides an environment that allows you to manage all loaded designs, switch between them, configure them independently (as all settings are still stored in individual \*.adf files) and, what is the most important, allows merging several designs and build the top-level project employing sub-designs.

The Workspace is built when you create a new design or open an existing one. Its definition is stored in a separate file (\*.aws) that contains information on all designs attached to the project workspace. This file stores paths to all designs (\*.adf) attached to the workspace. The relative paths allow you to move the entire structure of the workspace (all folders and files related to the workspace) to another folder or computer and then open the workspace again in Active-HDL without any additional modifications.

### NOTES:

- The [vendor-specific editions](#) of Active-HDL allow adding only one design to the workspace. This limitation does not apply to the *Synplicity Edition* and depends on purchased license.
- The Active-HDL workspace supports UNC (Universal Naming Convention) paths. This feature allows you to attach files or designs located anywhere in a local network to the workspace (assuming that you have access to appropriate resources).

A design can be a member of one or more workspaces. However, design names are unique within the confines of a single workspace and you will not be able to add two designs of the same name to the same workspace (in this case, Active-HDL will ask you whether you want to replace an existing design with a new one). This solution protects you from accidental changes in the workspace.

### NOTES:

- If a folder contains only the Design Description File (\*.adf) then the first attempt to open the design file causes the Workspace Description File (\*.aws) to be created first and then it is opened.
- If a folder contains the Design Description File (\*.adf) as well as the Workspace Description File (\*.aws) and the names of these files are the same then each attempt to open the design file causes the workspace to be loaded.

The workspace is empty when you create it for the first time [How?](#) . However, once you have opened or created it, you can perform the following operations:

- Add a design to the workspace [How?](#)
- Add an existing library as design to the workspace [How?](#)
- Remove a design from the workspace [How?](#)
- Set a design as active [How?](#)
- Compile individual designs or the entire workspace
- Archive designs or the workspace

Each design in the workspace preserves settings specified in the [Design Settings window](#) and appropriate flowchart dialog boxes ([Synthesis](#) and [Implementation Options](#)). A design added to the workspace is automatically set as inactive and the design previously set as active is still preserved. When a design is set as active, its design, synthesis, and implementation settings are automatically read and loaded.

### NOTES:

1. Active-HDL distinguishes an active design by displaying its name in bold in the **Design Browser - Files** window (see figures below). The name of the workspace and the active design is displayed on the title bar of the Active-HDL window.

2. Adding a new or existing Active-HDL project does not change the setting of the current active design within the current workspace.
3. All commands are targeted to an active design in the currently loaded workspace. Generally, when you execute the GUI or macro command, it is assumed that you want to perform operations on an active design. The following specific operations are related to the design that is currently set as active:
  - Adding and removing design resources
  - Compiling source files and defining compilation order
  - Selection of top-level
  - Initializing simulation
  - Initializing simulation in the *Post Simulation Debug* mode
  - Initializing co-simulation or C/Handel-C debug session
  - Viewing a design structure on the **Structure** tab
  - Viewing design resources on the **Resources** tab
  - Generating IP CORE modules
  - Generating testbenches
  - Scheduling tasks for *Server Farm*
  - Specifying synthesis and implementation tools
  - Setting up synthesis and implementation options
  - Specifying whether synthesis and/or implementation tasks are performed locally or on *Server Farm*
  - Collecting data for *Code* or *Toggle Coverage*
  - All operations related to *Source Revision Control*
  - Archiving and restoring designs
  - Recording and playing local actions
4. The following operations can be applied to any design attached to the workspace (no matter whether the design is set as active or not):
  - Editing source files
  - Defining, modifying, and using signal aliases
  - Defining, modifying, and using code templates from the **Language Assistant**
  - Recording and playing global actions

The picture below shows a sample workspace (*modulator.aws*) with four designs attached. Note that **generator** is set as the active design.

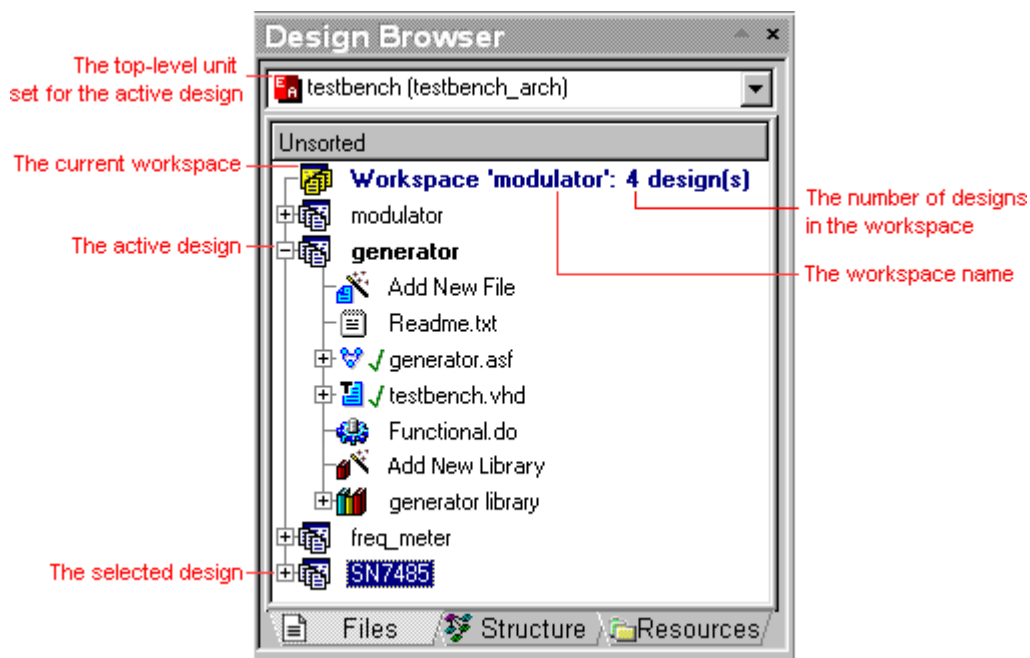

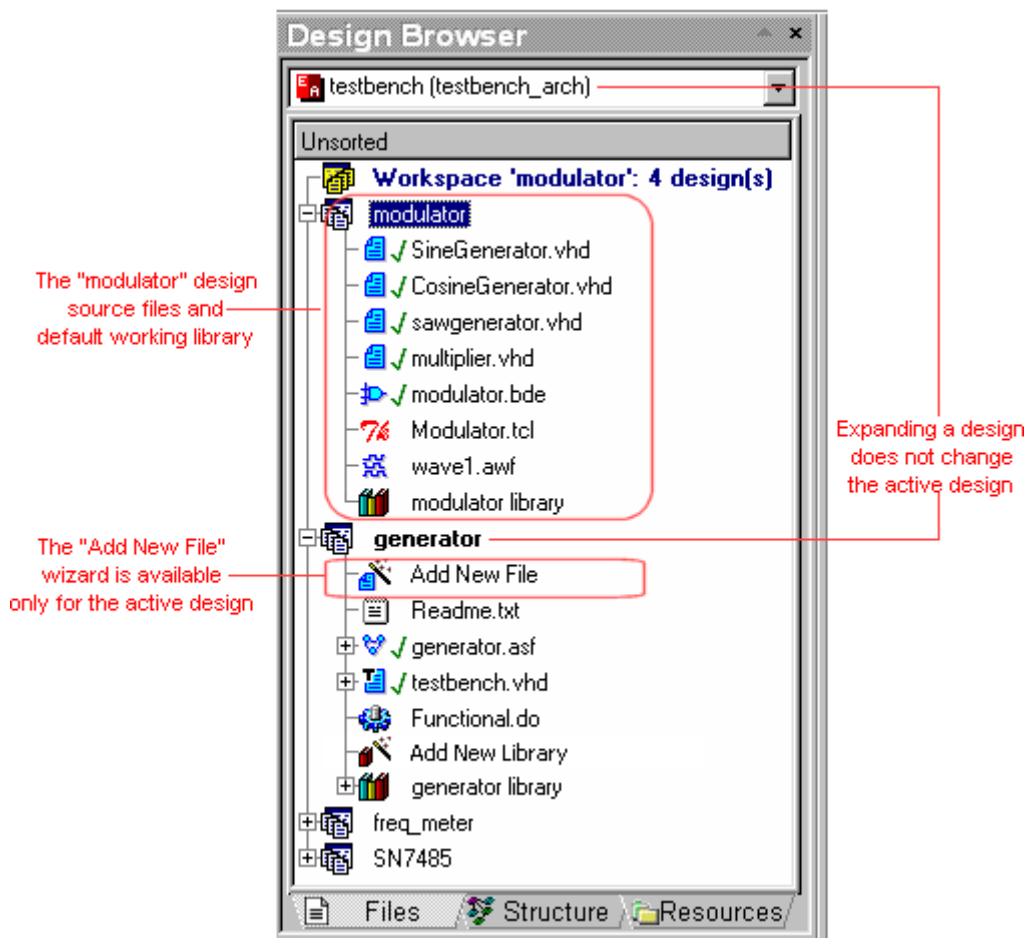


Figure 1. The sample workspace.

To see an internal structure of a given design, you need to expand it by clicking the plus sign . Figure 2 shows the workspace after the *modulator* design has been expanded.



*Figure 2. Expanding one of the designs attached to the workspace.*

When you expand a design, it does not automatically become the *active* design. To set a design as active, right-click the design name and use the **Set as Active Design** option. This prevents you from inadvertently setting an inactive design as the active one.



#### NOTES:

- Active-HDL remembers which designs attached to the current workspace are expanded or collapsed on the **Files** tab of the **Design Browser** window. This information is saved into the Workspace Description File (\*.aws) while closing the workspace and then it is used to restore the state of these designs when you open the workspace again.
- After you have opened a workspace, an active design is automatically expanded on the **Files** tab no matter it was collapsed when you were closing the workspace.

The workspace provides instant access to files of all attached designs. You can open any file from any design in the workspace by double-clicking its name in the **Design Browser** window. If you open a block diagram containing a symbol coming from other than current working library (design), you can quickly access its source by pushing the symbol. No matter how many files are opened in the Active-HDL environment and from which design they come from, when you choose to compile a design, only files from the active design will be compiled. If you decide to compile a single file that does not belong to an active design, you will be asked whether you want to add the file to the active design first.

Since the workspace allows you to add several designs, it is possible to drag files from inactive designs to the design currently set as active. A file dragged from an inactive design to the active one will be automatically copied and attached to the active design. The reverse operation is not allowed and you cannot move files outside the active design, which prevents you from accidental changes in the workspace and inactive designs.

The workspace also provides an environment that allows you to manage all libraries ([local and global](#)) associated with designs currently added to the workspace. Each design attached to the workspace enables its libraries to other designs, which means they become global libraries until the workspace is opened. The workspace also has an influence on the way how global libraries are set. They can be attached whether or not a workspace is loaded. However, a system library (global for all Active-HDL designs) can be added to the [Library Manager](#) if the workspace is closed. Otherwise, such a library is treated as global only within the confines of the currently loaded workspace. Additionally, if a design employs local libraries, they are visible only for the design that is currently set as active.

The [Workspace/Design Explorer](#) facilitates management of both workspaces and designs. It supports the process of their creation and controls the physical location of the workspace (\*.aws) and design (\*.adf) files. The Workspace/Design Explorer displays two different types of shortcut icons that represent the Active-HDL workspaces  and designs , respectively.

Designs also can be created/added to the workspace by using the **New Design Wizard** (the **File | New | Design** menu option or the **Add New Design to Workspace** pop-up option of the workspace icon). It enables two additional options that allow users to create a new workspace (**Create New Workspace**) or add a design to the current workspace (**Add Design to Current Workspace**).

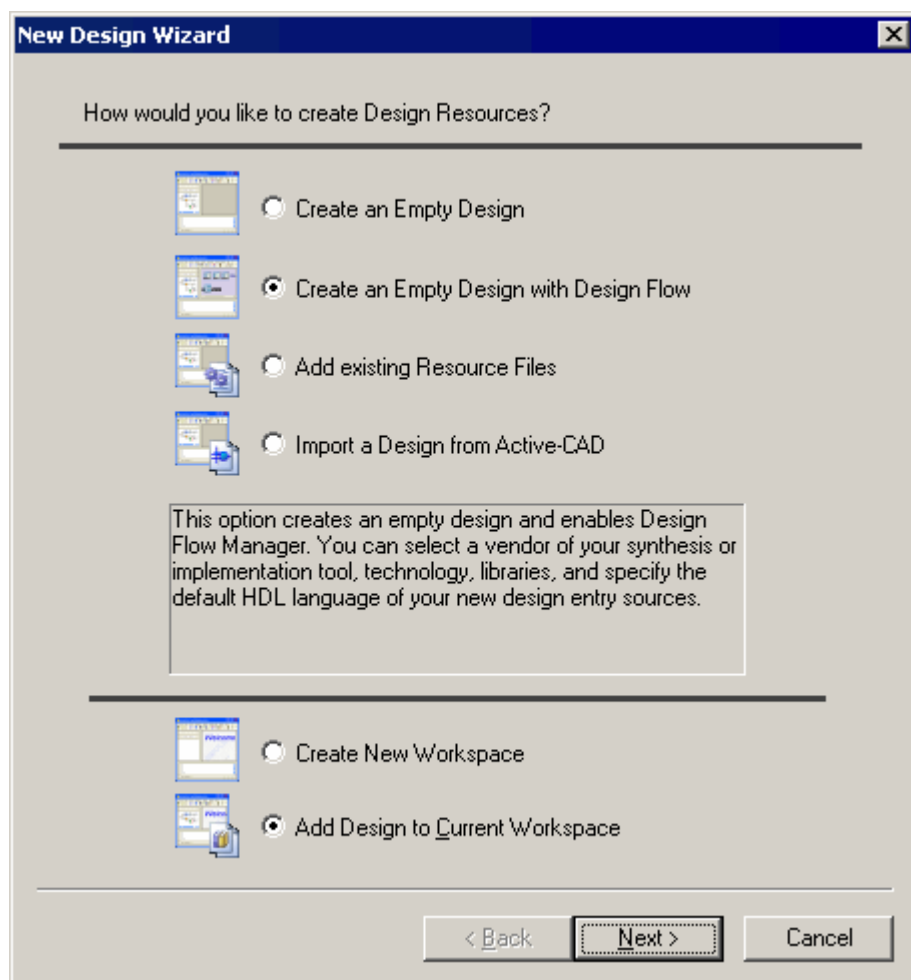


Figure 3. The **New Design Wizard** window.

When **Create New Workspace** is chosen then the default design path will be used (*C:\My\_Designs\*). If the **Add Design to Current Workspace** option is set, the current workspace folder will be assumed and each new design folder will be a subfolder of the current workspace directory. In both cases, the flowchart settings (synthesis/implementation tool, default family and HDL language) are inherited from the currently set active design.

An environment of every workspace is specified by three **predefined** variables:

- \$WSP points to the workspace's folder (e.g. *c:\my\_designs\<workspace\_folder>*)
- \$WSPPATH points to the \*.aws workspace file stored in the *<workspace\_folder>* folder (e.g. *c:\my\_designs\<workspace\_folder>\<workspace\_name>.aws*)
- \$WSPNAME specifies the name of the workspace (*<workspace\_name>*).

### Operations Related to Workspace

The following operations are related to the Active-HDL workspace:

- [Creating a workspace](#)
- [Opening a workspace](#)
- [Adding a design to workspace](#)
- [Removing a design from workspace](#)
- [Setting a design as active in a workspace](#)
- [Compiling a workspace](#)

- [Setting compilation order](#)
- [Generating a compilation order macro](#)
- [Deleting simulation data](#)



#### Related Topics



#### Related Procedures