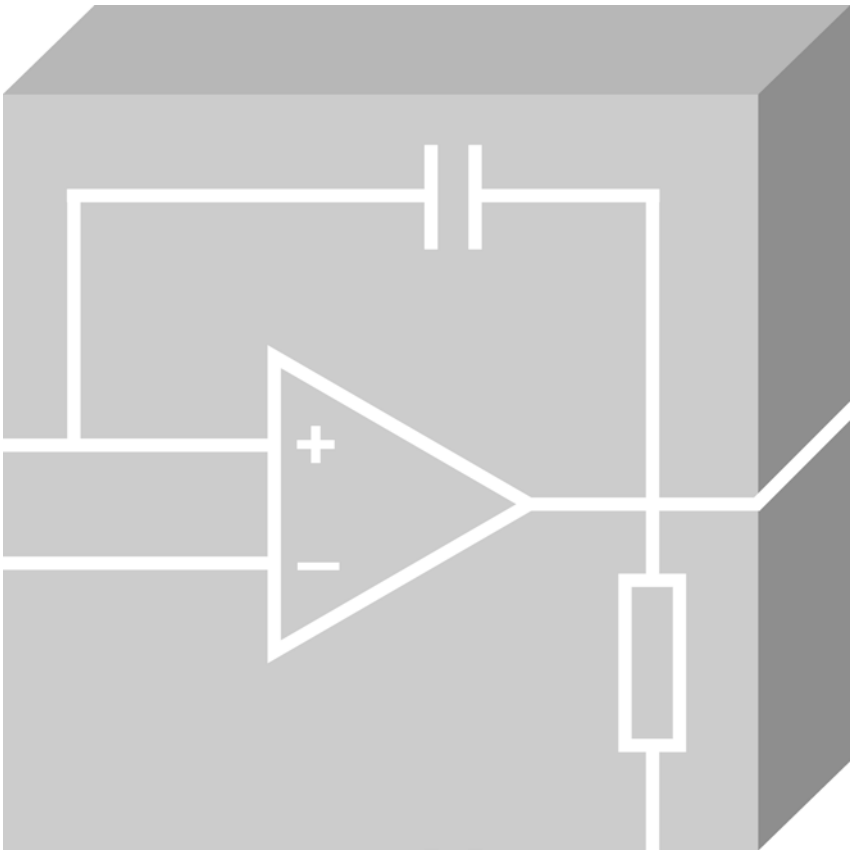
FlowCAD

cRefer Custom Variable



Allegro Design Entry HDL

Application Note | V2.0

FlowCAD

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1 Design Entry HDL Custom Variables

Custom variables are special variables, which are supported by Design Entry HDL. You can use these variables for intelligent plotting of cross-referenced schematics. For example, using these variables you can place page information such as **This is page 1 of 24** on the cross-referenced schematics. You can also use custom variables to store information such as the company name and author name.

1.1 Adding cRefer Custom Variables

There are 7 variables, which are specifically useful for CRefer. For example, the **CREF_TO_LIST** variable defines where the pages for the block are located in the cross-referenced flattened design. Similarly, the CREF_FROM_LIST variable defines where the pages are coming from in a design.

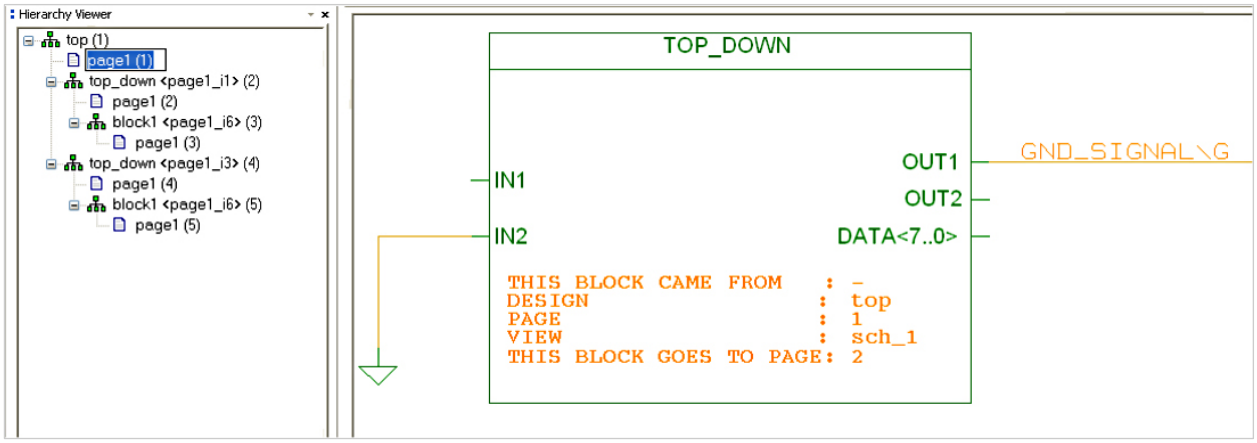
Note:

CRefer specific custom variables will be substituted when you run CRefer with the **Generate Flattened Schematic** check box selected.

1.2 The List of Available CRefer Variables

Variable Name	Description
CREF_TO_LIST	Defines where the pages for the blocks are located in the cross-referenced flattened design
CREF_FROM_LIST	Defines where the pages in a flattened design came from in the original design
CREF_ORIG_DESIGN_NAME	Defines the original design name
CREF_ORIG_PAGE	Defines the original page number
CREF_ORIG_VIEW	Defines the name of the original view
TOTAL_DESIGN_SHEETS	Lists the total number of pages in the Design Entry HDL schematic
CURRENT_DESIGN_SHEET	Lists the sheet number of the current page in the schematic

1.3 Example [Multiple Block Instantiation – Root Drawing]

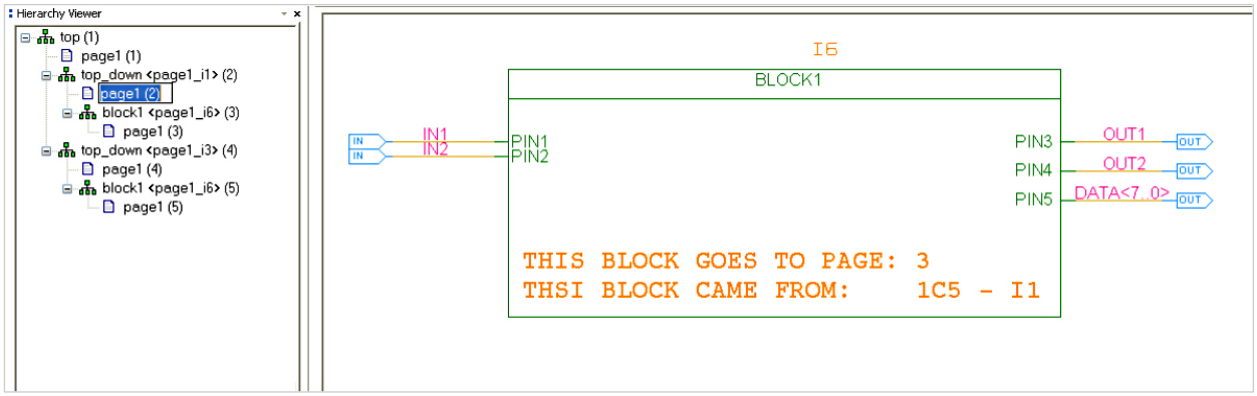


The Sample design has one page at the top level (TOP). The TOP page contains two identical blocks TOP_DOWN (multiple instantiations) of one page schematic represented by page 2 and page 3. On each page 2 and page 3 additional blocks have been placed BLOCK1 (multiple instantiations). After cross-referencing, the design will consist of five pages, where Page 1 corresponds to the block TOP, pages 2 and 3 correspond to the block TOP_DOWN, and pages 4 to 6 correspond to the block BLOCK1.

Under the symbol on page 1 for block TOP_DOWN is annotated a property:

```
CREF_TO_List   = Page 2
CREF_FROM_List =
```

1.4 Example [Hierarchical Block – Lower-level Drawing]



While on the Symbol border of Symbol BLOCK1 is annotated another property:

```
CREF_FROM_List = 1C5 - I1
```

Where I1 is the instance name (for block TOP_DOWN) and 1C5 is the cross-reference for the hierarchical symbol.

Note

For replicated and read-only blocks, CRefer calculates the value of the CREF_TO_LIST and CREF_FROM_LIST custom variables and annotates them to the cref.opf file as CDS_CREF_TO_LIST and CDS_CREF_FROM_LIST variables.