

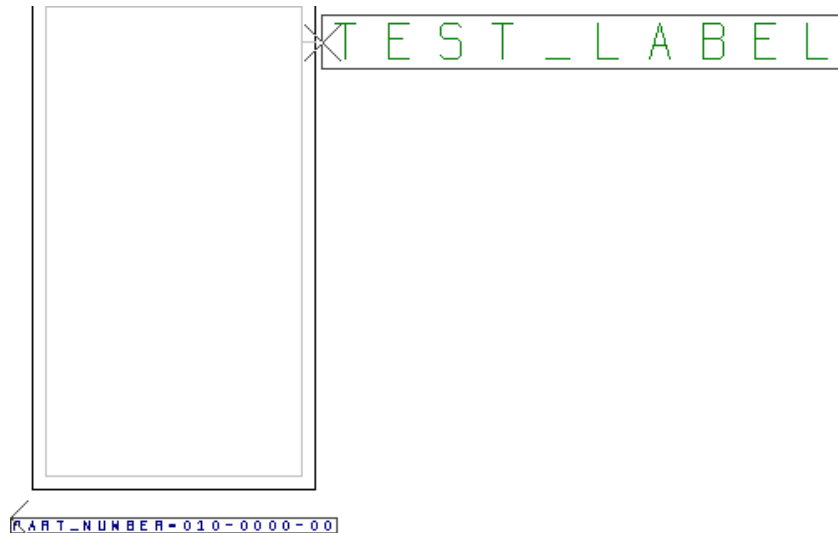
ViewDraw File Formats

Rev. 0.0 – 3.18.2002, SDB

Rev. 0.1 – 3.19.2002, SDB. Bugfix.

Introduction and purpose of document.

ViewDraw stores information about schematics and symbols as ASCII text files. An example symbol and the associated symbol file (ascii text) is shown below.



```
V 51
K 01
Y 1
D 0 0 200 350
Z 10
i 674
U 0 -260 10 0 1 0 PKG_TYPE=FG456
U 0 -250 10 0 1 0 DEVICE=FOO_2S150FG456
U 0 -240 10 0 1 0 FPGALINK=C:\SDB\PHY_FPGA\PHY_FPGA_LOCAL\PHY_FPGA_LOCAL2\TOP.PA
+ D
U 0 -230 10 0 1 0 LEVEL=STD
U 0 -220 10 0 1 0 REFDES=U?
U 0 -210 10 0 1 0 COST=5.00
U -15 -20 10 0 1 1 PART_NUMBER=010-0000-00
b 10 10 190 340
P 671 200 315 190 315 0 3 0
L 205 315 37 0 2 0 1 0 TEST_LABEL
E
```

As is evident, ViewDraw stores information in a line-oriented fashion. The beginning of each line declares the item it will describe, and the remainder of the line carries the attributes of the item.

This document attempts to capture the meaning of the lines in the ViewDraw files so that people may write scripts to manipulate the file using e.g. Perl scripts. Innoveda refuses to

give out this information since it regards it as “proprietary”. Therefore, to discover the format of the file I spent a couple of hours experimenting: I made changes in the symbol file and observed the effect in ViewDraw. This document attempts to capture the results. I also consulted a posting by juha.manninen@datex-ohmeda.com to the Innoveda user’s group <http://groups.yahoo.com/group/innoveda_users/message/450> which supports my conclusions.

Note that I was using ViewDraw 8.0.0 run via eProduct designer version 2.0. Other versions of ViewDraw may use a different format. Finally, there is no guarantee that the information contained herein is correct or complete. I have used it only briefly to fix a problem with one of my symbol files. Use it at your own risk.

Symbol file format

V

Version number.

K

According to several discussions on Usenet, this line is a magic number created from the ViewLogic license and the file name. If you change this line, you can break your file. Do not edit this line.

Y

Symbol type. The format is:
`Y type`

Attribute	Explanation	Comment
<code>type</code>	0 = composite 1 = module 2 = annotate 3 = pin	

D

Determines the size of the symbol block. The format is:

`D xmin ymin xmax ymax`

Where the min and max values are the numeric values giving the symbol block size available on the “properties” pop-up menu.

Z

Sheet size. The format is:
`Z size`

Attribute	Explanation	Comment
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size	Sheet size. 0 = A 1 = B 5 = A4 10 = Z (user defined)	
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i

Unknown function

U

Attribute available under the “properties” pop-up menu. The format is:

U xpos ypos text_size rotation text_pos scope attribute

Attribute	Explanation	Comment
xpos, ypos	Position of attribute text	
text_size	Font size of text	Usually 10
rotation	0 = 0 1 = 90 2 = 180 3 = 270	
text_pos	Location of text anchor 1 = lower 2 = middle 3 = upper	
Scope	0 = local 1 = global	
attribute	Text form of attribute, usually expressed as Attribute=value	

P

Pin. The format is:

P pin_id xend yend xbeg ybeg rotation side invert

Attribute	Explanation	Comment
pin_id	Unique numerical ID of pin. Numbering starts at 1.	
xend, yend, xbeg, ybeg	Begin and end of line designating pin.	
rotation	0 = 0 1 = 90 2 = 180 3 = 270	

side	??	Valid values are 0 .. 4, usual value is 2.
invert	0 = not inverted 1 = inverted (bubble on pin)	

A

Attribute attached to the preceding pin. The format is:

A xpos ypos text_size rotation text_pos visibility
attribute

Attribute	Explanation	Comment
xpos, ypos	Position of attribute	
text_size	Font size of text	Usually 10
rotation	0 = 0 1 = 90 2 = 180 3 = 270	
text_pos	Location of text anchor 1 = lower 2 = middle 3 = upper	
visibility	0 = invisible 1 = visible 2 = name only 3 = value only	
Attribute	Text form of attribute, usually expressed as Attribute=value	

L

Label attached to the preceding pin. The format is:

L xpos ypos text_size rotation text_pos scope
visibility logic_sense text_label

Attribute	Explanation	Comment
xpos, ypos	Position of attribute	
text_size	Font size of text	Usually 10
rotation	0 = 0 1 = 90 2 = 180 3 = 270	
text_pos	Location of text anchor 1 = lower 2 = middle	

	3 = upper	
scope	0 = local 1 = global	
visibility	0 = invisible 1 = visible 2 = name only 3 = value only	
logic_sense	0 = normal 1 = inverted (bar above label)	
text_label	Text label of pin	

b

Determines the size of a box drawn on the screen (inside the symbol block). The format is:

```
b xmin ymin xmax ymax
```

E

End of file.

Schematic file format

This section is TBD.

Other information

Line continuation

Note that line continuation is effected by placing a '+' symbol in the next line, inserting one space, and then continuing with the information from the previous line.