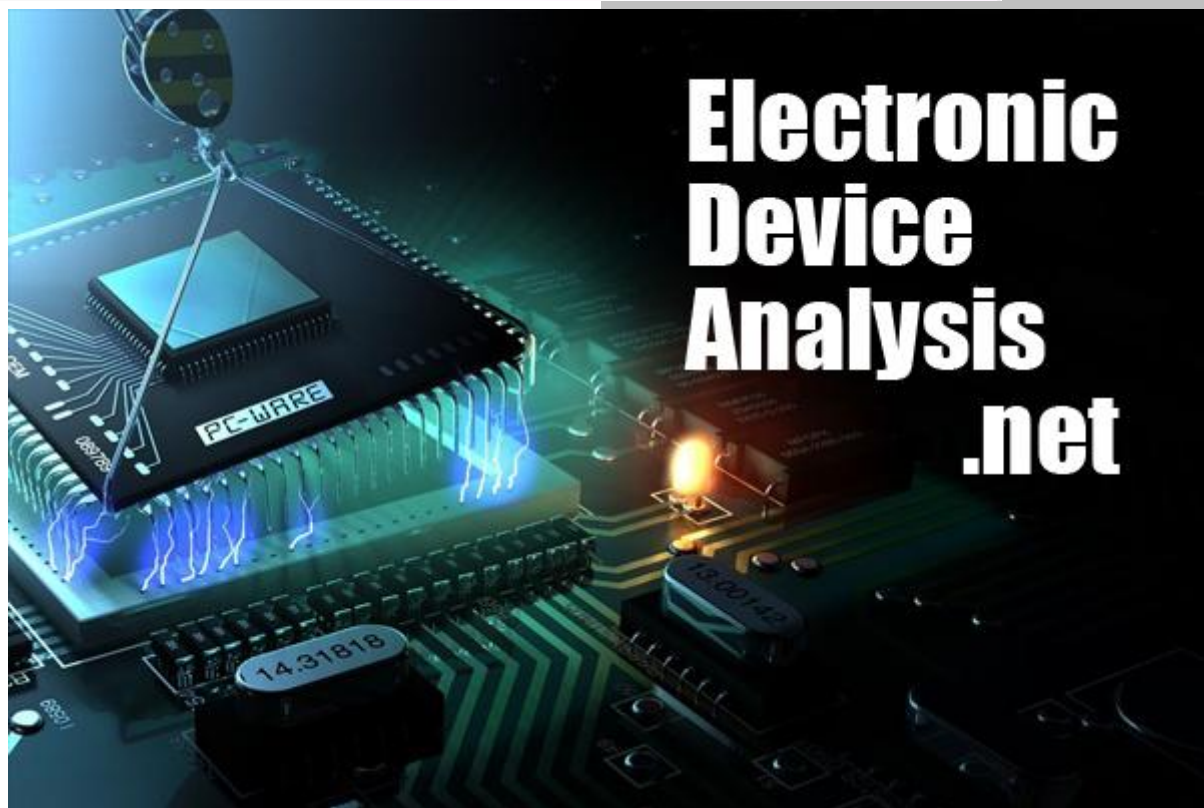




# Brigen One

Version: 1.0.904

## User Guide



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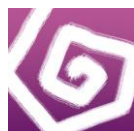
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**Science Vision**

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## User Guide For BrigenOne

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# Overview

Welcome to Brigen One—great choice to view circuit analysis projects!

Brigen One, hereafter referred to as BrigenOne, is a reverse engineering circuit analysis viewer. It launches quickly and requires no installation. BrigenOne includes various advance features, such as viewing different layers, and switching working interface etc.

## 1.0 Getting Started

This section gives you an overview of BrigenOne, including opening the application, project, and work area.

### 1.1 Windows System Requirments

BrigenOne runs successfully on the following systems. If your computer does not meet these requirments, you may not be able to use BrigenOne.

### 1.2 Operating Systems

- Windows 7 (32-bit & 64-bit)
- Microsoft Windows XP Home, Professinal with Service Pack 2 or 3 (32-bit & 64-bit)


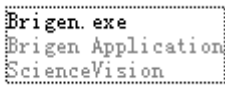
### 1.3 Recommended Minimum Hardware for Better Performance

- 1.3 GHz or faster processor
- 1 GB RAM (Recommended: 2 GB RAM or greater)
- Sufficient hard drive space based on the data you would like to browse (at least 100 MB of available drive space)
- 800\*600 screen resolution



## 1.4 How to run the application?

If you download the "Brigen.exe" file to your computer, please do the following:

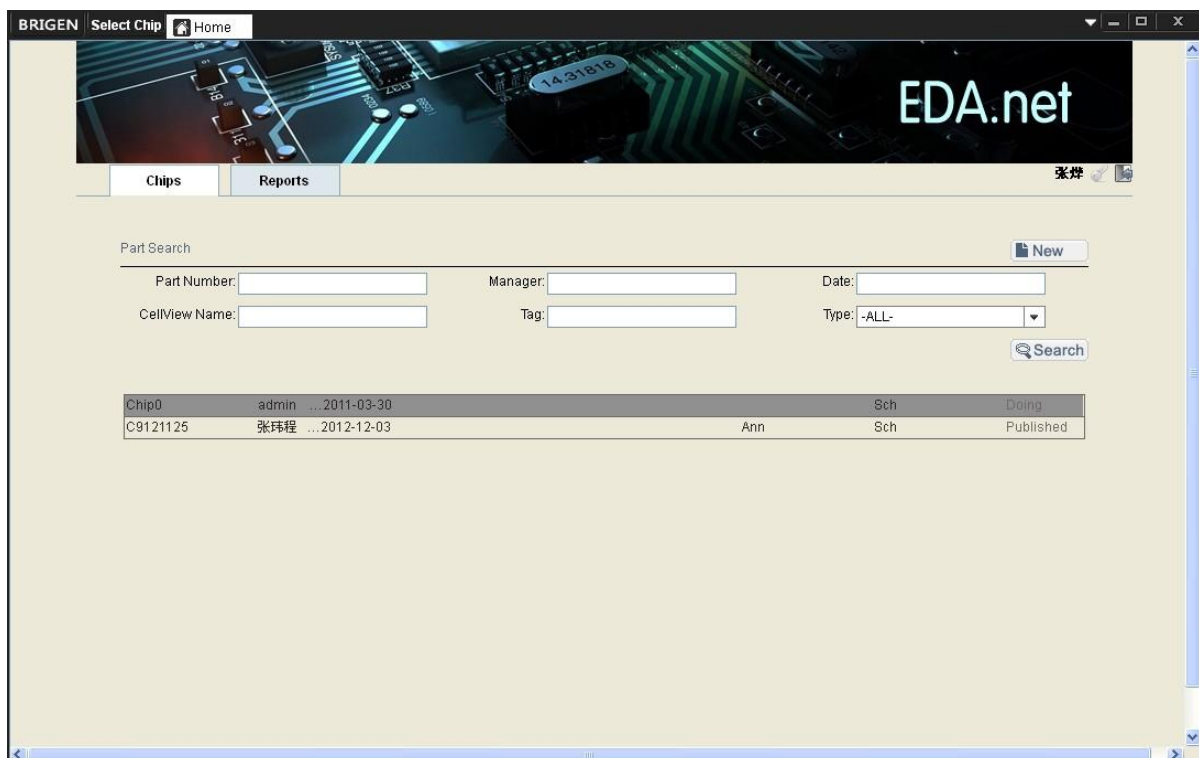
- Double click the icon   and you will see the login page pop up.



- Enter your account name and password and click Login to continue.



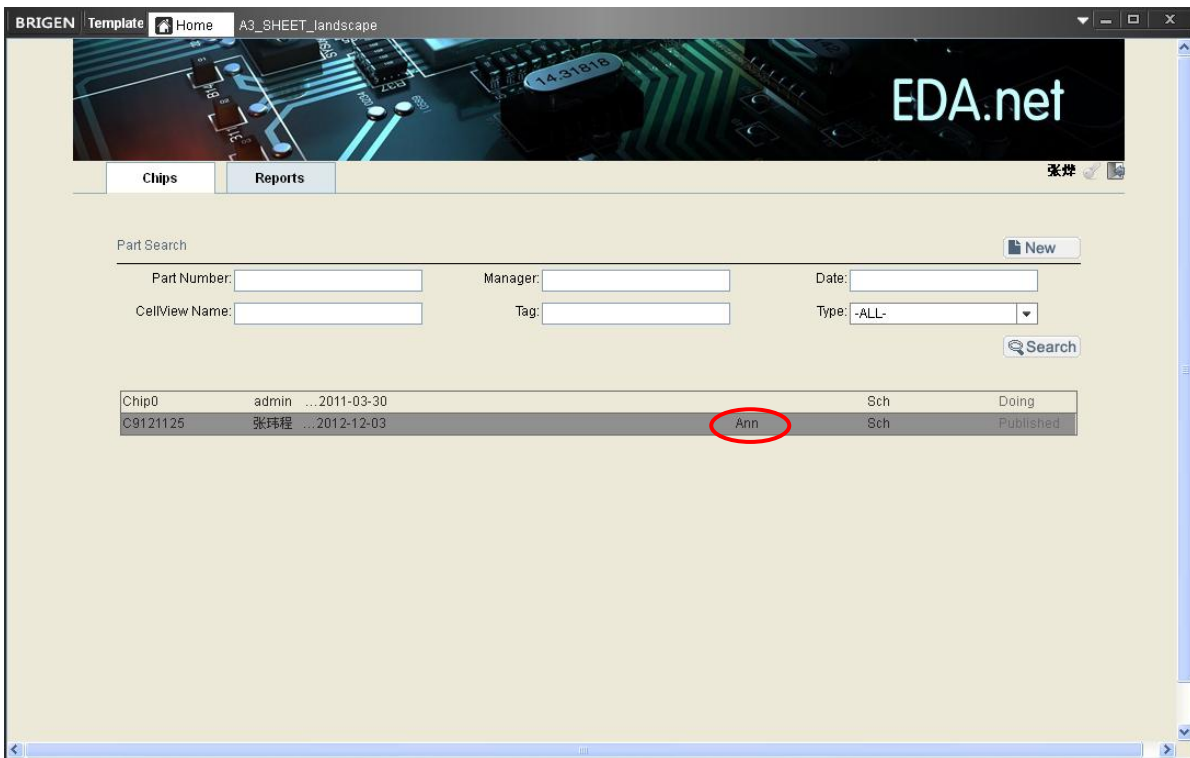
- Project management page appears.



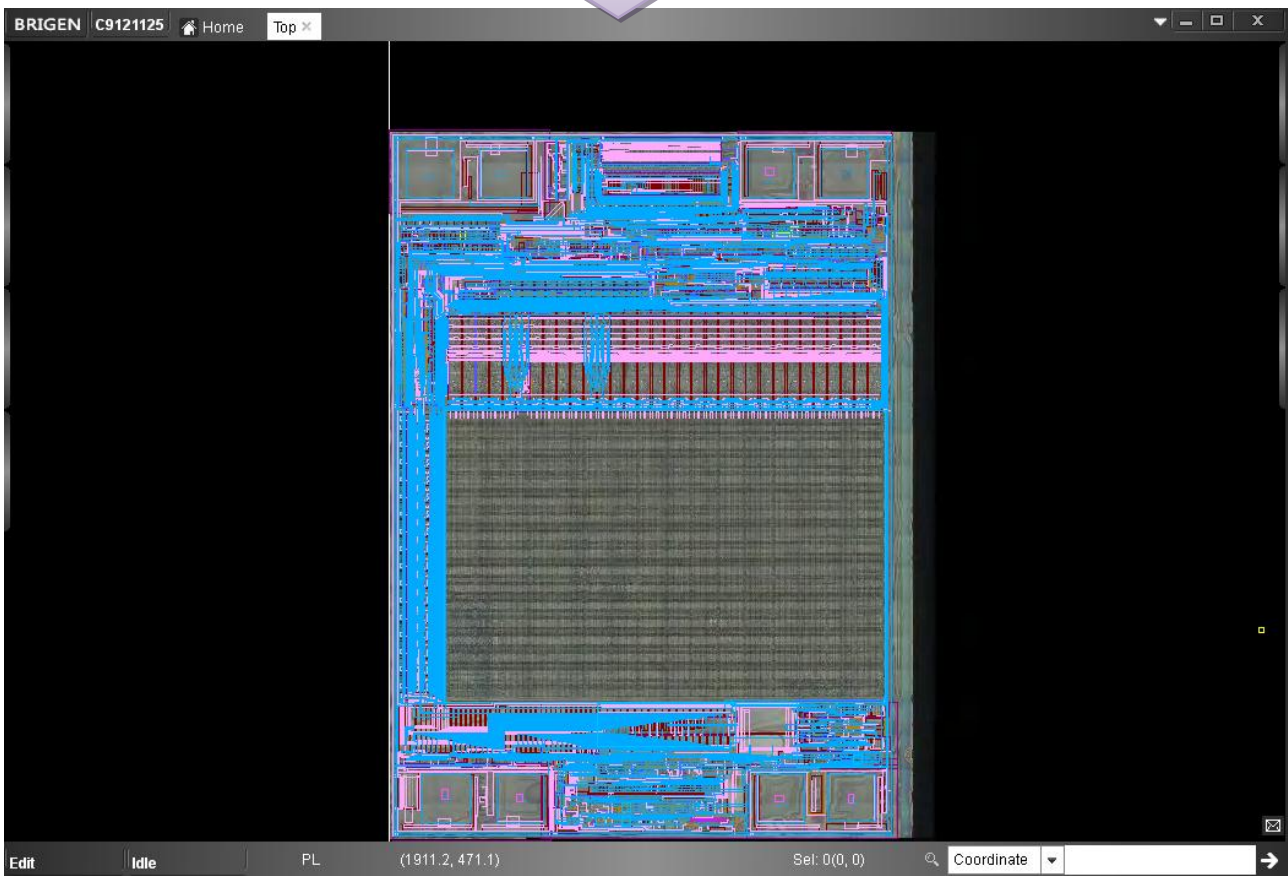
**NOTE:** Chip0 includes analog library, digital library, pins, sheets, etc. Chip0 is non-editable in BrigenOne.



- In the section of project C9121125, click Ann to view Top's annotation.

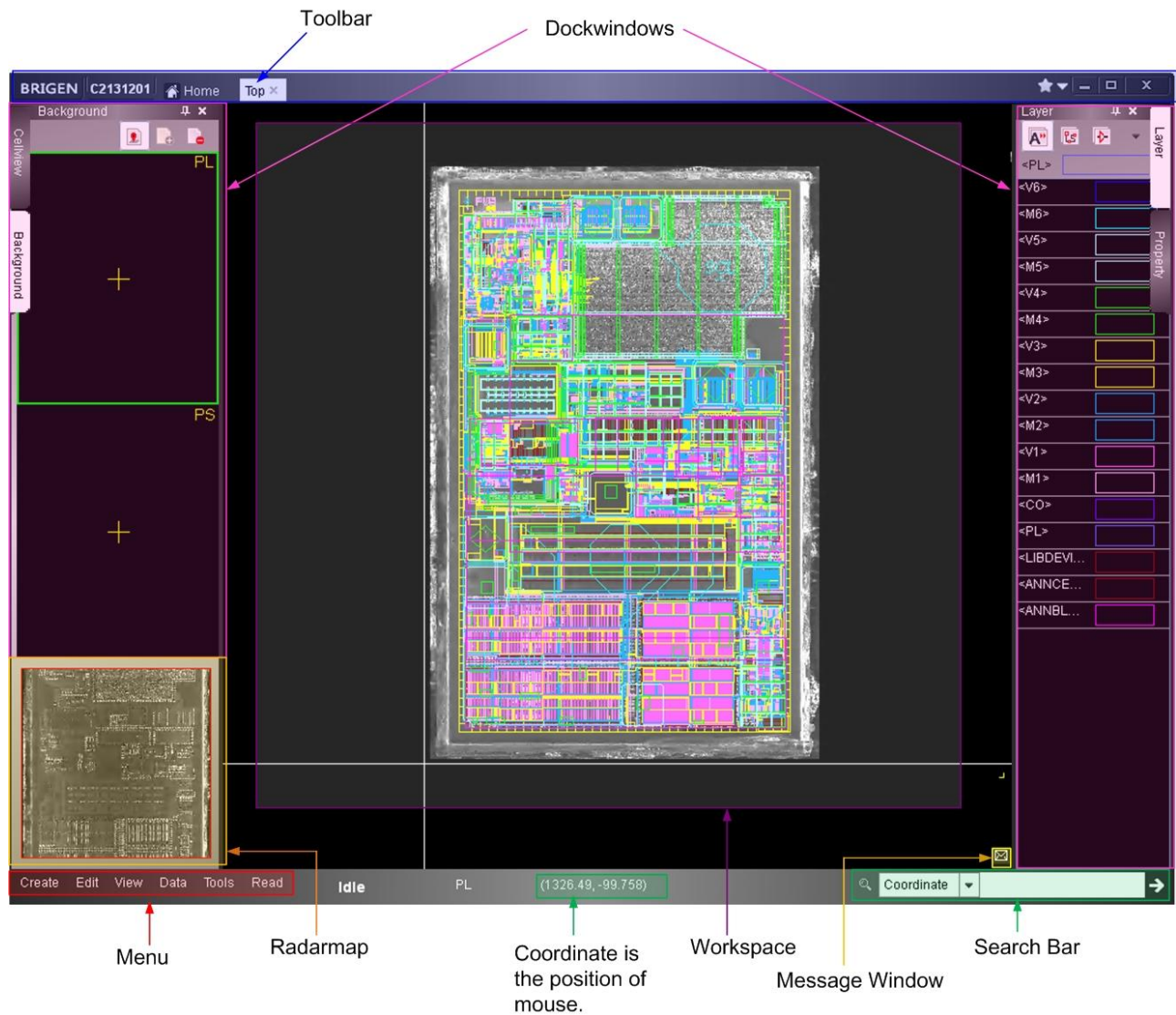


- Annotation



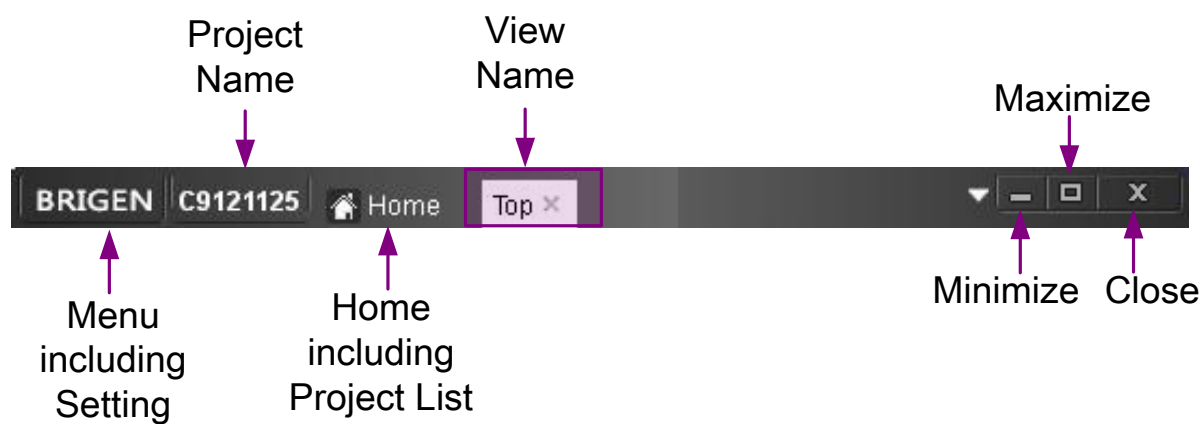
## 2.0 Working Interface

### 2.1 Overview of Interface





## 2.2 Overview of toolbar

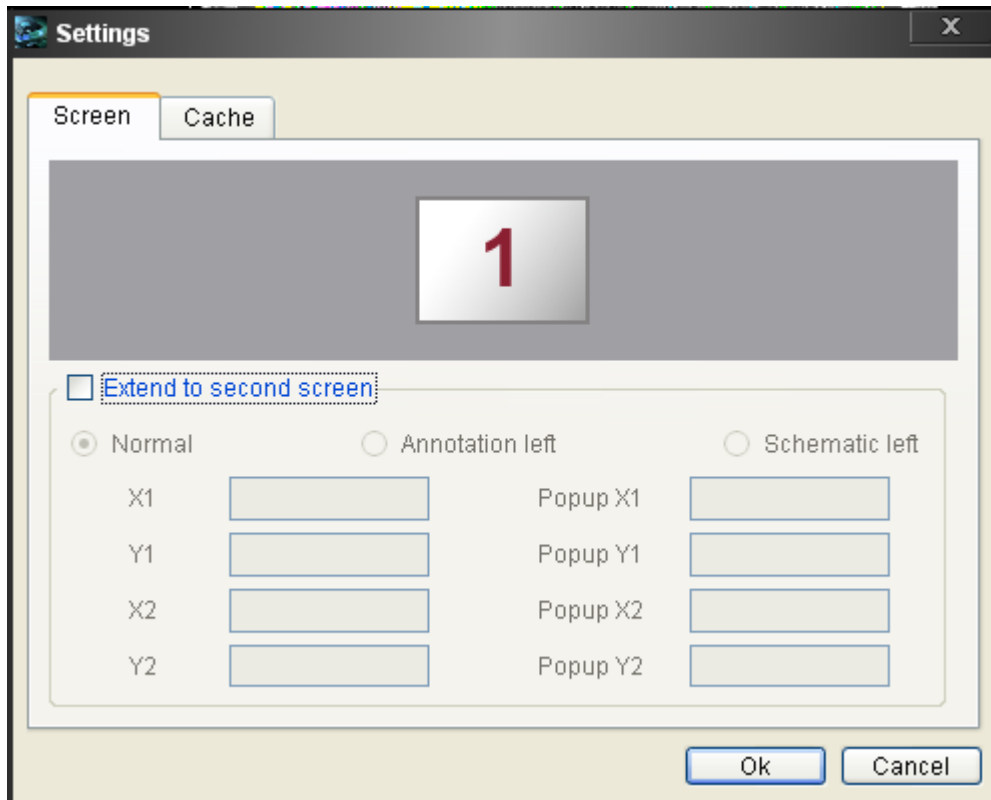


### 2.2.1 Dual Display Setting


- From the BRIGEN menu, select Setting

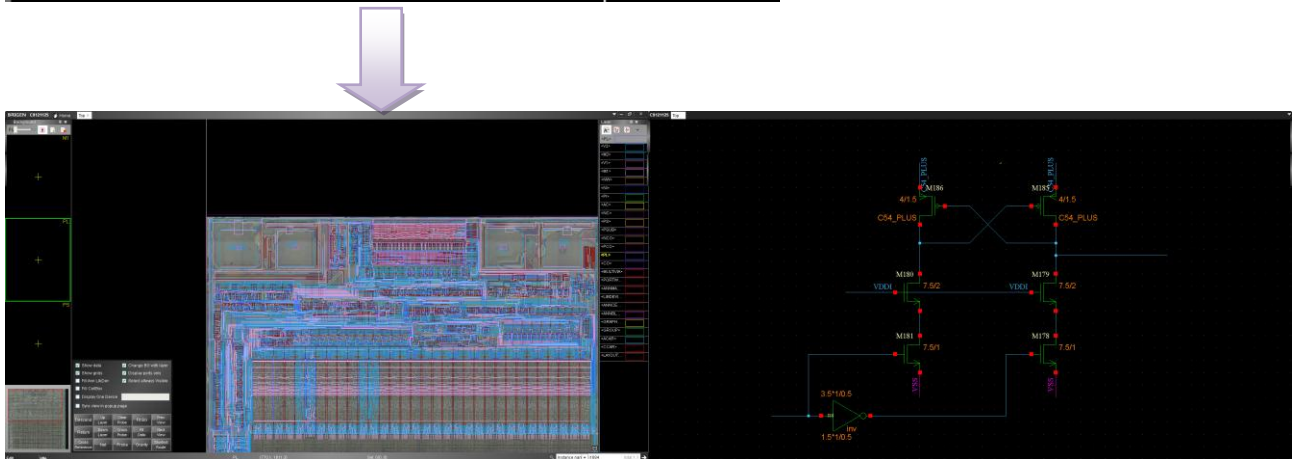


- Click Screen Tab to set dual display







**NOTE:** The display default setting is dual-screen display. Normal means Annotation will be shown on your main screen (display 1); Schematic will be shown on display 2. You can also select Annotation left or Schematic left to display data.

- Click "Top", then click  and activate dual screen to read project data.

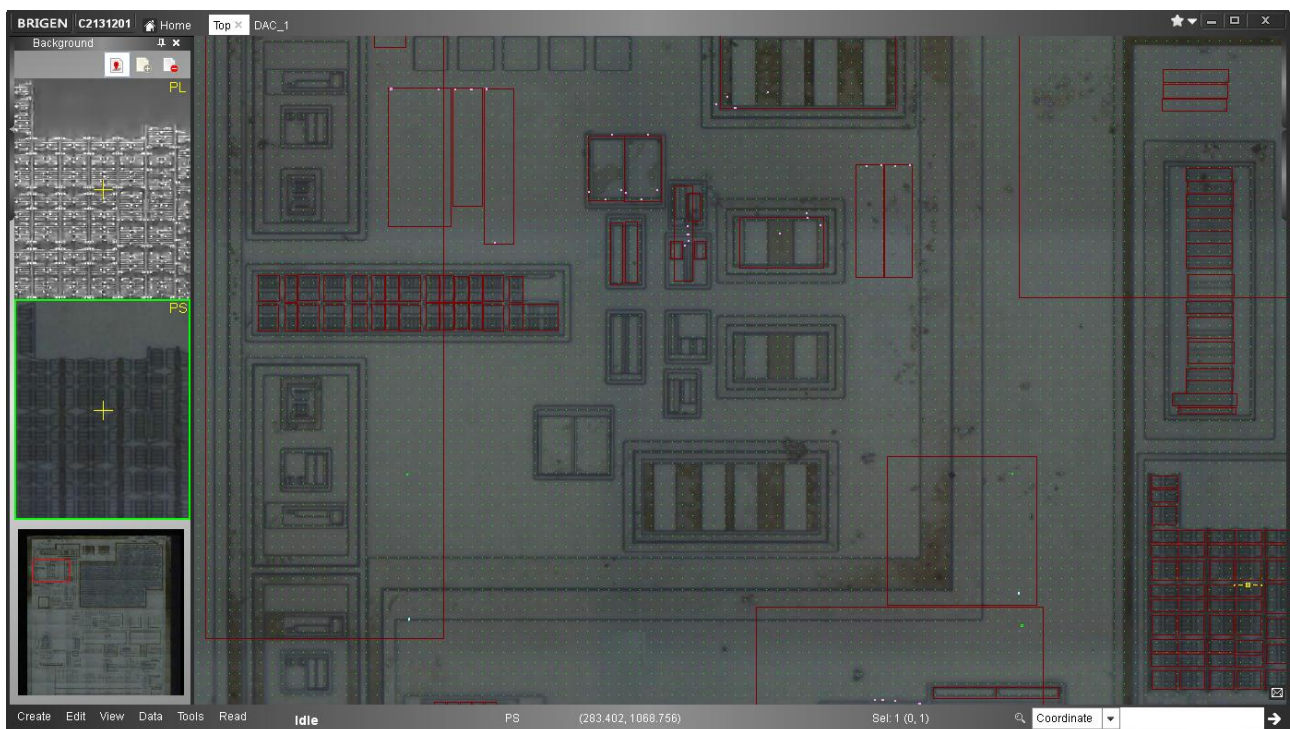


## 2.2.2 Description of adjusting the view

Function	Operation
Move Left	Press [LEFT]  on your keyboard
Move Right	Press [RIGHT]  on your keyboard
Move Up	Press [UP]  on your keyboard
Move Down	Press [DOWN]  on your keyboard
Zoom In	Press Ctrl + roll up mouse wheel
Zoom Out	Press Ctrl + roll down mouse wheel
Continuous Zoom In	Continuously press mouse left button
Continuous Zoom Out	Continuously press mouse right button
Zoom Area	Press mouse right button and drag, the area with yellow border is the selected area to zoom.

## 2.2.2.1 Zoom In

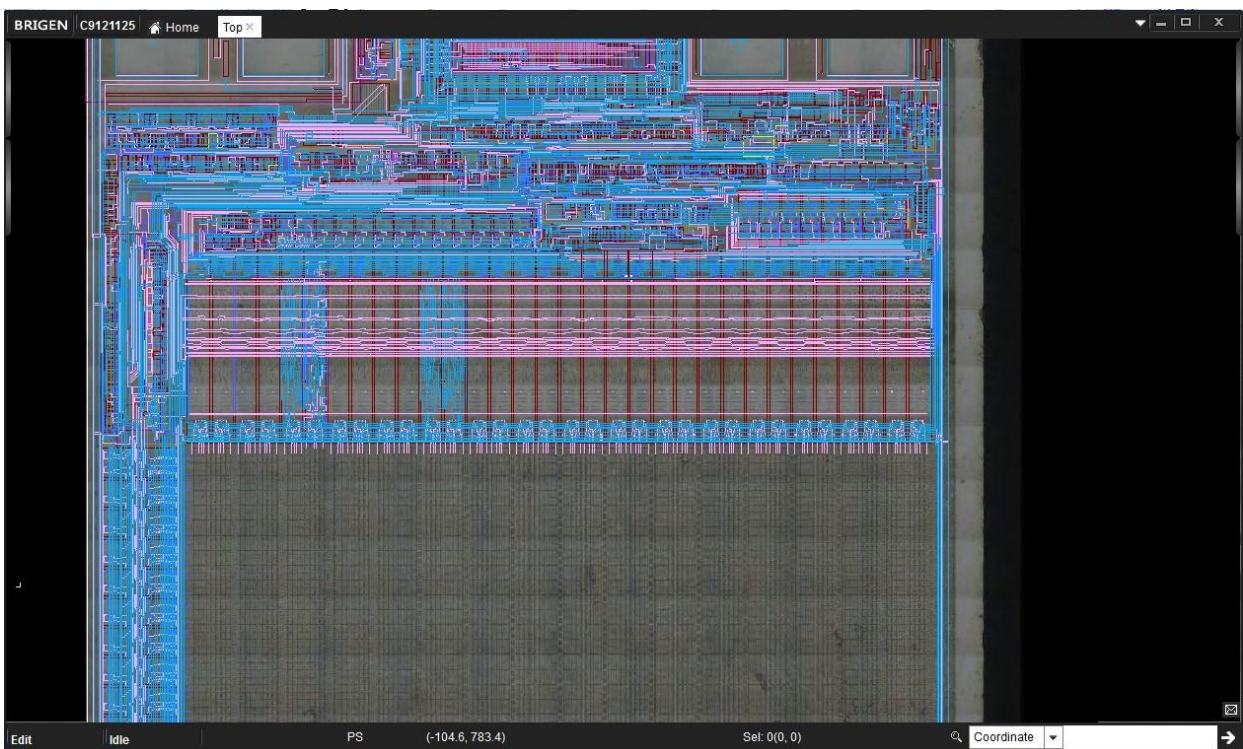
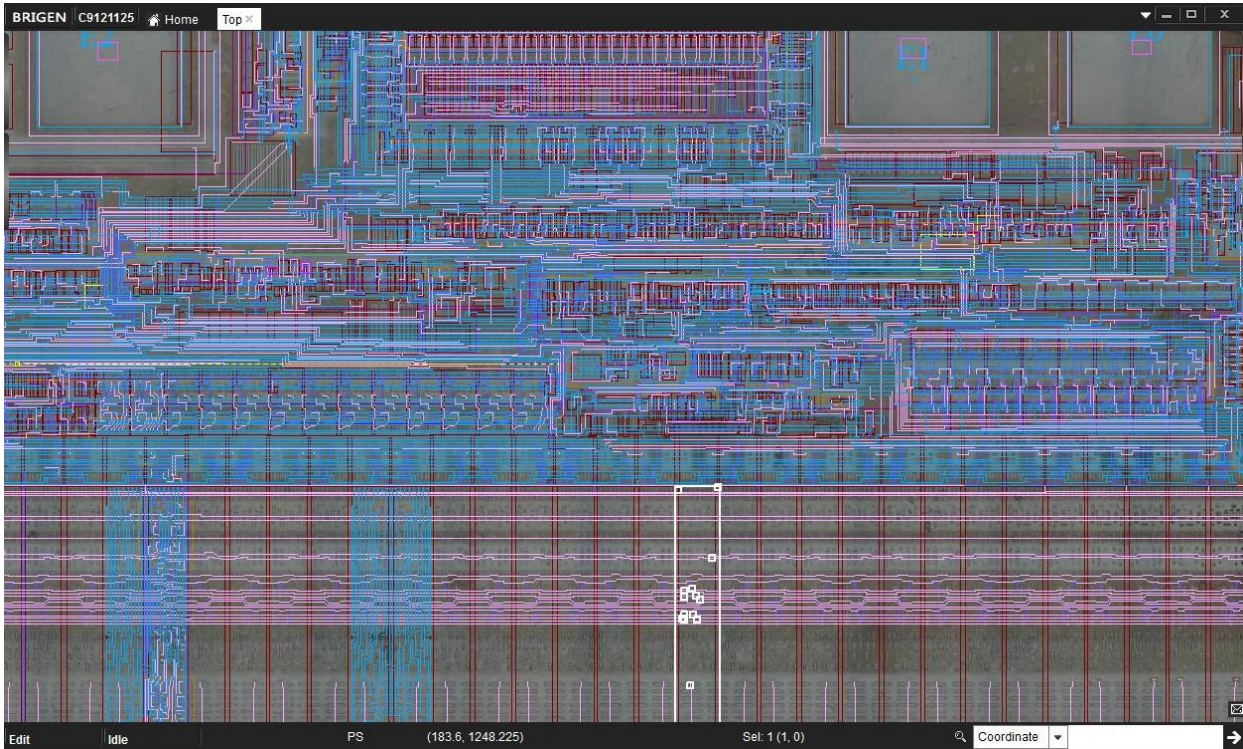
Press Ctrl + roll up mouse wheel or continuously press mouse left button





## 2.2.2.2 Zoom Out

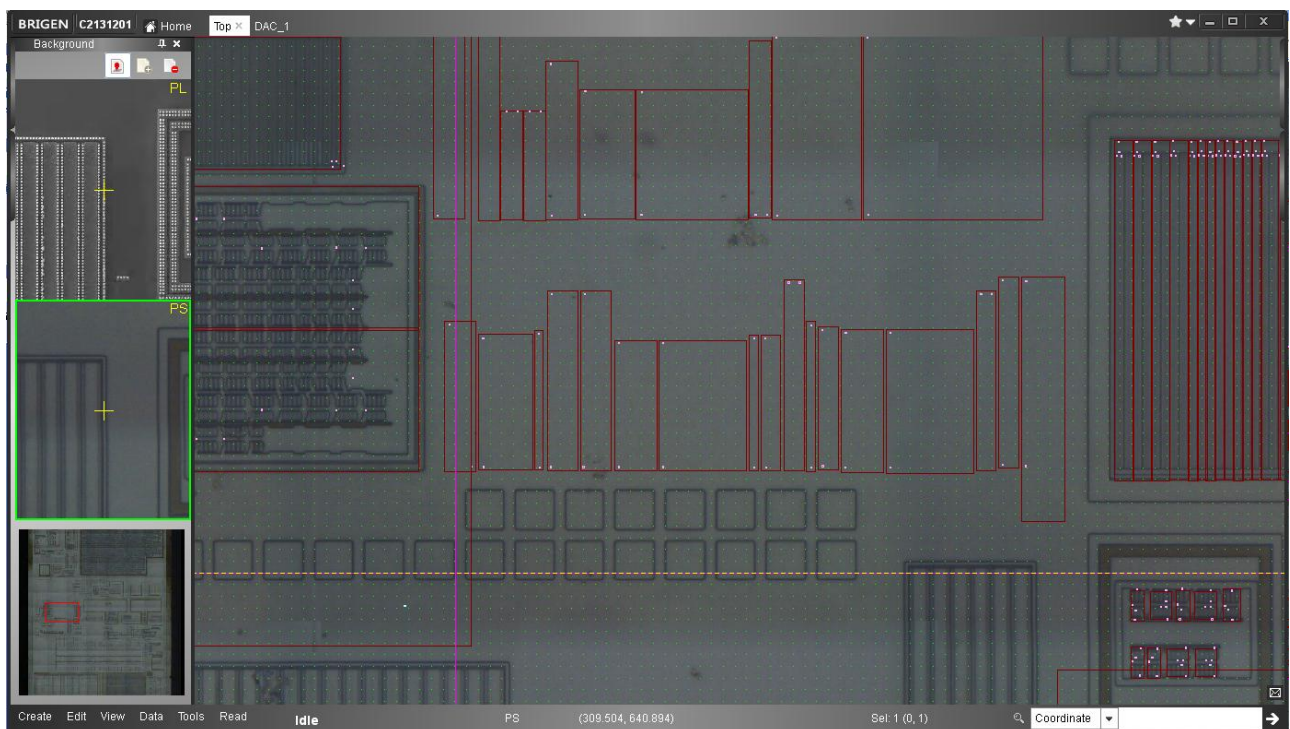
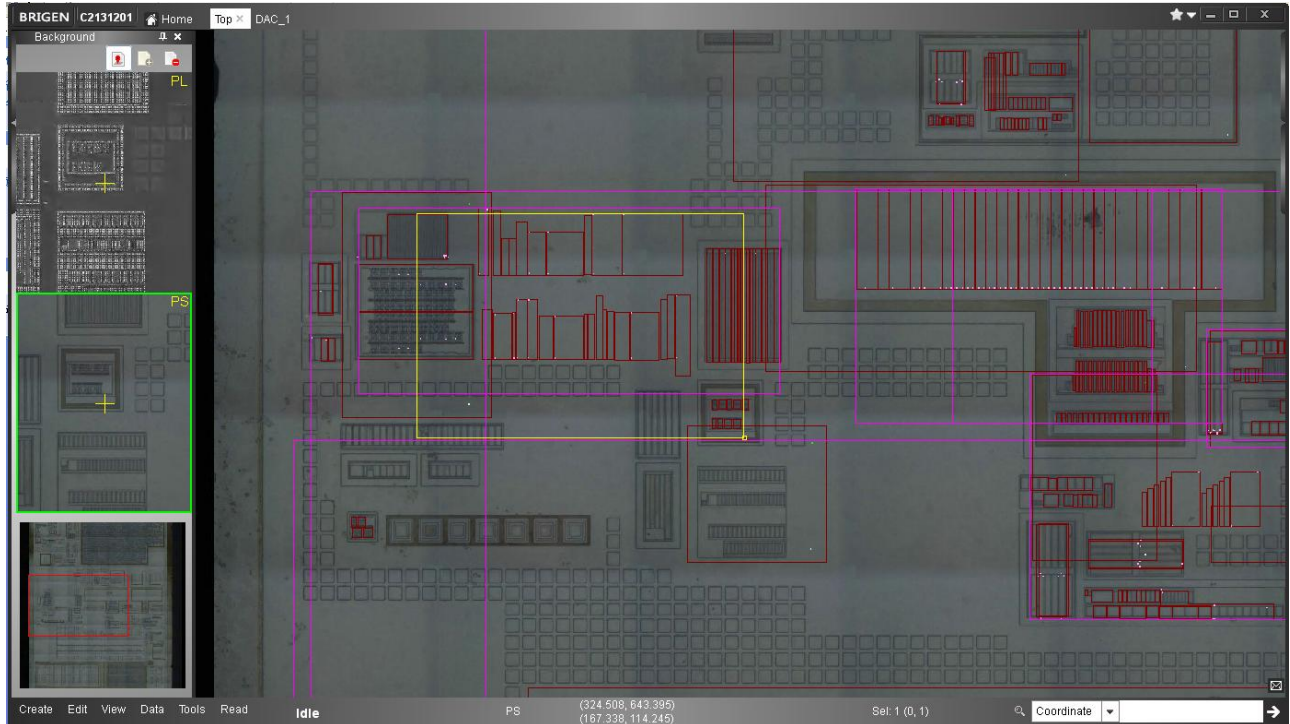
Press Ctrl + roll down mouse wheel or continuously press mouse right button





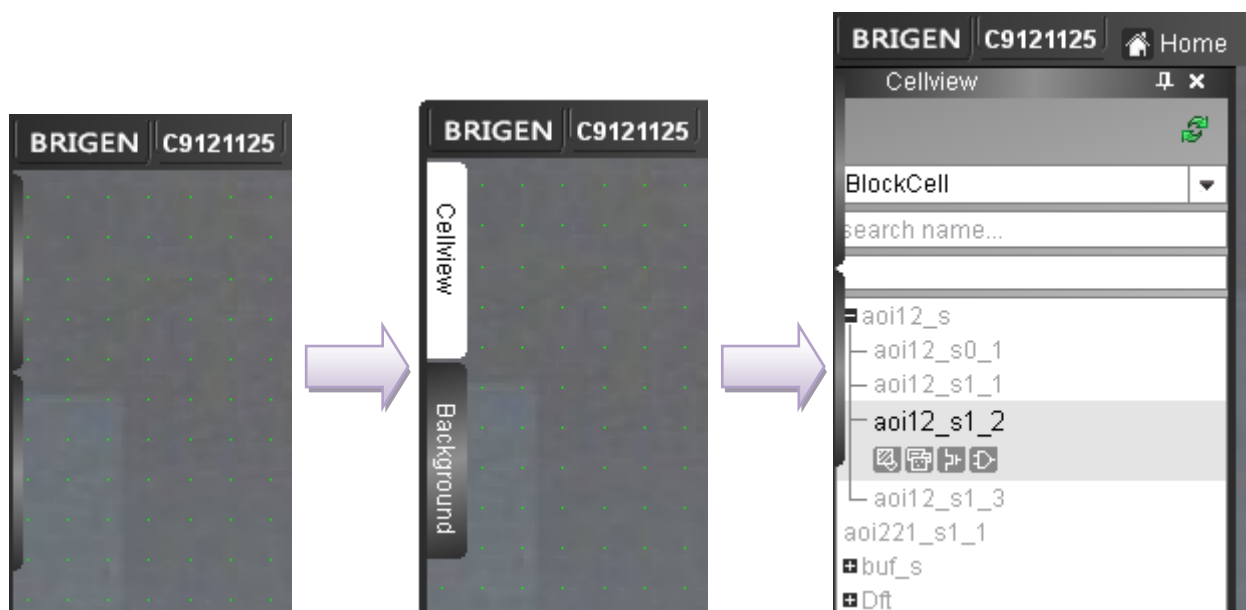
## 2.2.2.3 Zoom Area

Press mouse right button and drag, the area with yellow border is the selected area to zoom



## 2.3. Cellview & Background Panel

When you move your cursor over the **LEFT** border, Cellview & Background panel can automatically expand. Cellview & Background panel collapse when you move your cursor away. Double-click on the tab will keep the panel to remain expanding until you choose to collapse or close the tap.



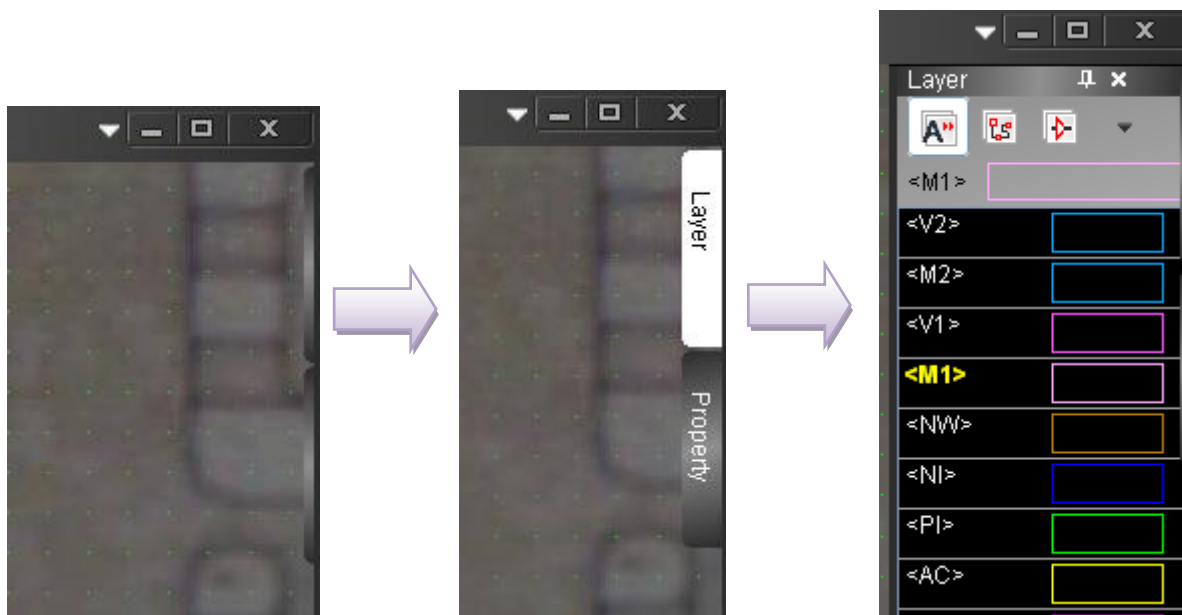
### Description of Icons:

- : Close
- : Panels collapse when cursor moves away
- : Panels remain expanding

TIP: You can switch the tap expanding/collapsing status through clicking or .

## 2.4 Layer & Property Panel

When you move your cursor over the **RIGHT** border, Layer & Property panel can automatically expand. Layer & Property panel collapse when you move your cursor away. Double-click on the tab will keep the panel to remain expanding until you choose to collapse or close the tab.



### Description of Icons:

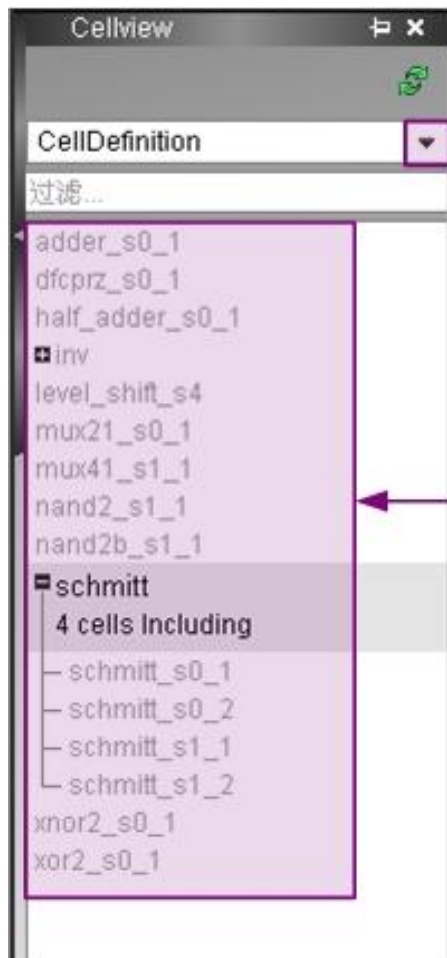
: Close

: Panels collapse when cursor moves away

: Panels remain expanding

TIP: You can switch the tap expanding/collapsing status through clicking or .

## 2.5 Cellview Window

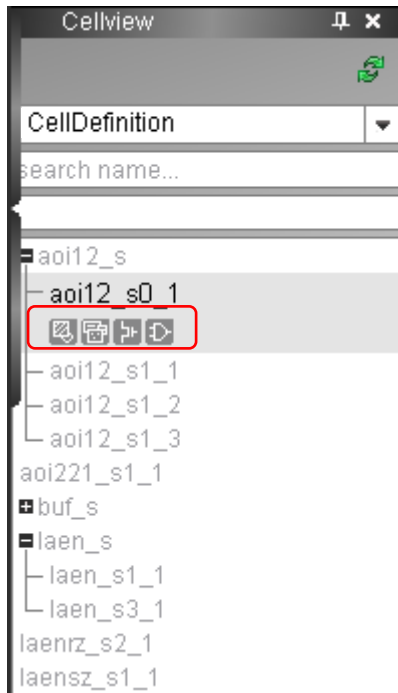



- Click the drop-down list and select BlockCell or CellDefinition.
- Digital cells are in CellDefinition.  
All hierarchy schematics are in BlockCell.

### Cellview List

Click "+" to expand all of the items listed,  
Click "-" to collapse all of the items in the  
view





## 2.5.1 How to open views



Select a cell name, for example "aoi12\_s0\_1", and four icons appear. Click one of them, for example , and schematic view of aoi12\_s0\_1 will be opened and the name of aoi12\_s0\_1 will display.



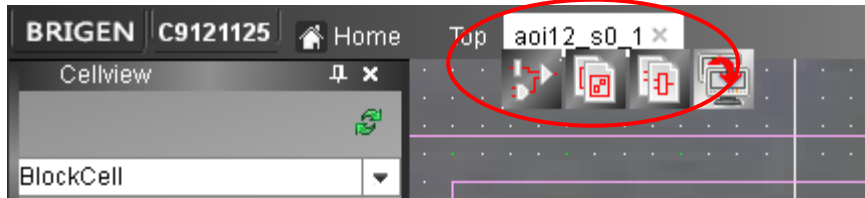
### Description of icons:

- : Annotation View
- : Schematic View
- : Annotation Symbol View
- : Schematic Symbol View



## 2.5.2 Switching views

When you move your cursor to cell name area, view icons appear.



To select different view through clicking different icon

### Description of view icons:



: Annotation View



: Schematic View



: Annotation Symbol View

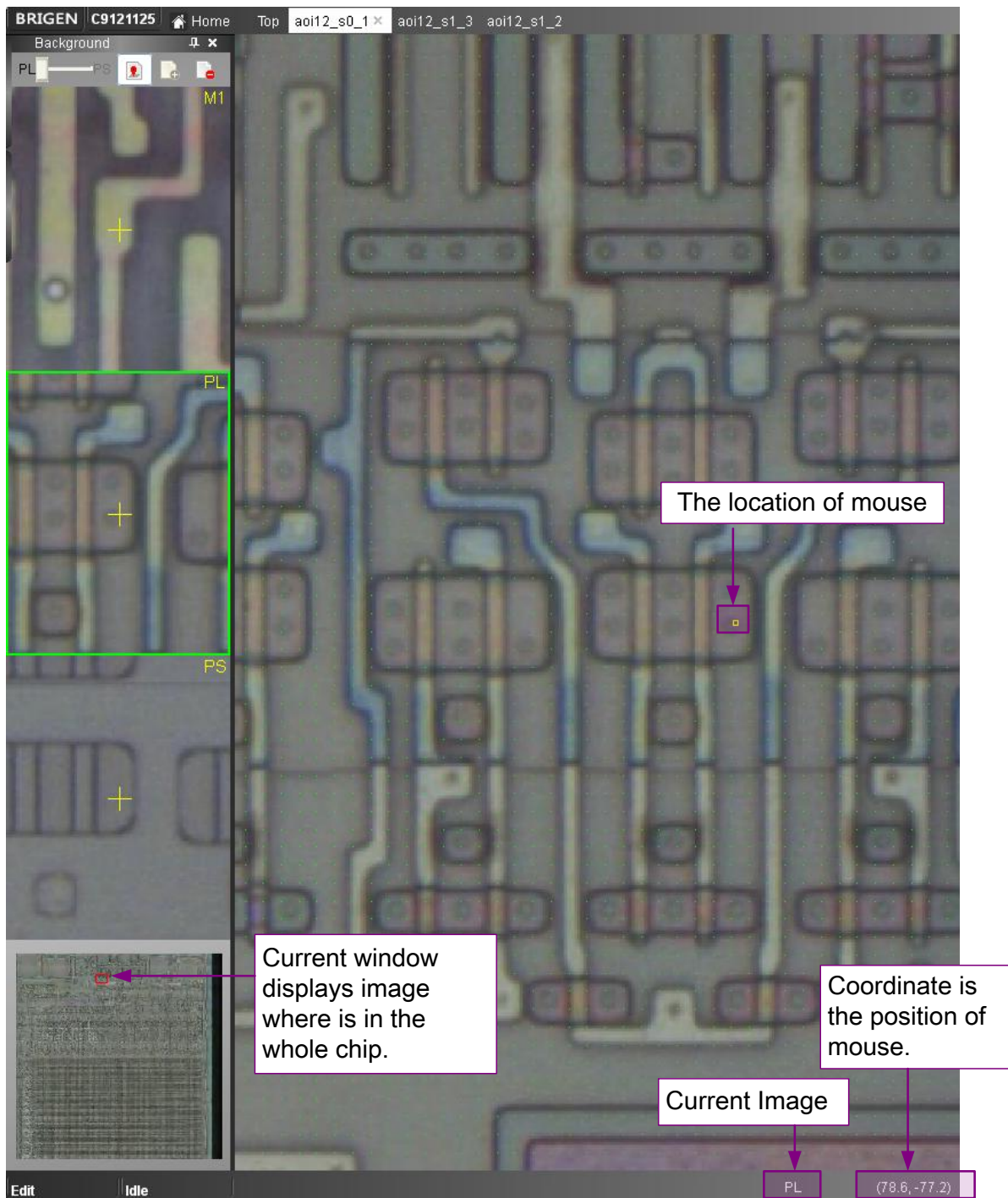


: Schematic Symbol View

## 2.7 Background Window

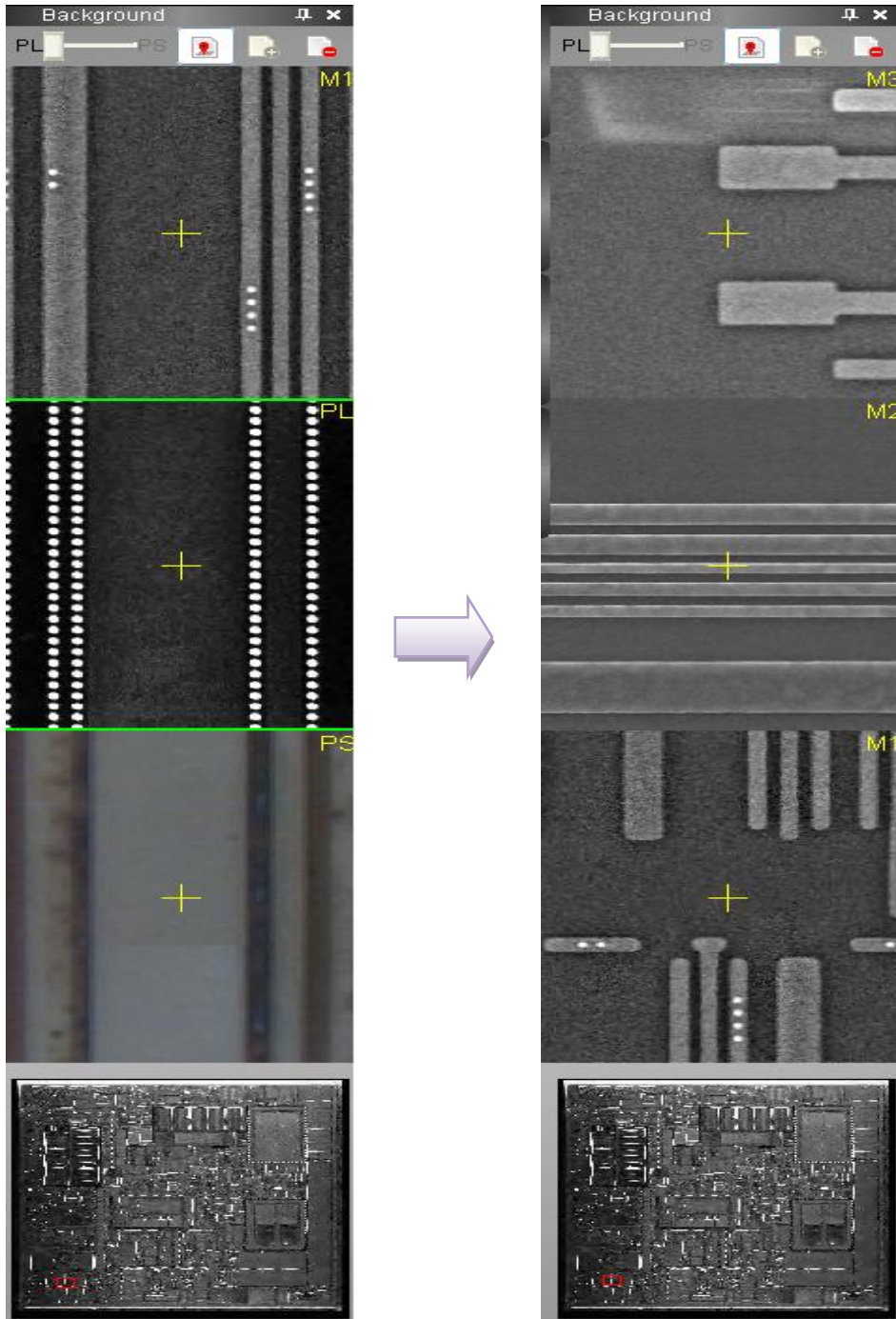
### 2.7.1 Overview of Background Window

Background window allows users to see several image layers of the same location at the same time.



## 2.7.2 Switching view of Image Layers


Move your cursor anywhere on background image, and you will see different image layers on the left (with Background panel expansion). Move your cursor to the Background panel area, and roll your mouse scroll wheel up and down, you will all processed image layers.




**TIP:** Double click layer area on Background panel, and the background image will switch to the layer that you select.

## 2.7.3 Switching view of image Layers on keyboard

1) Method One: Click anywhere in workspace and make workspace active. Then, use short

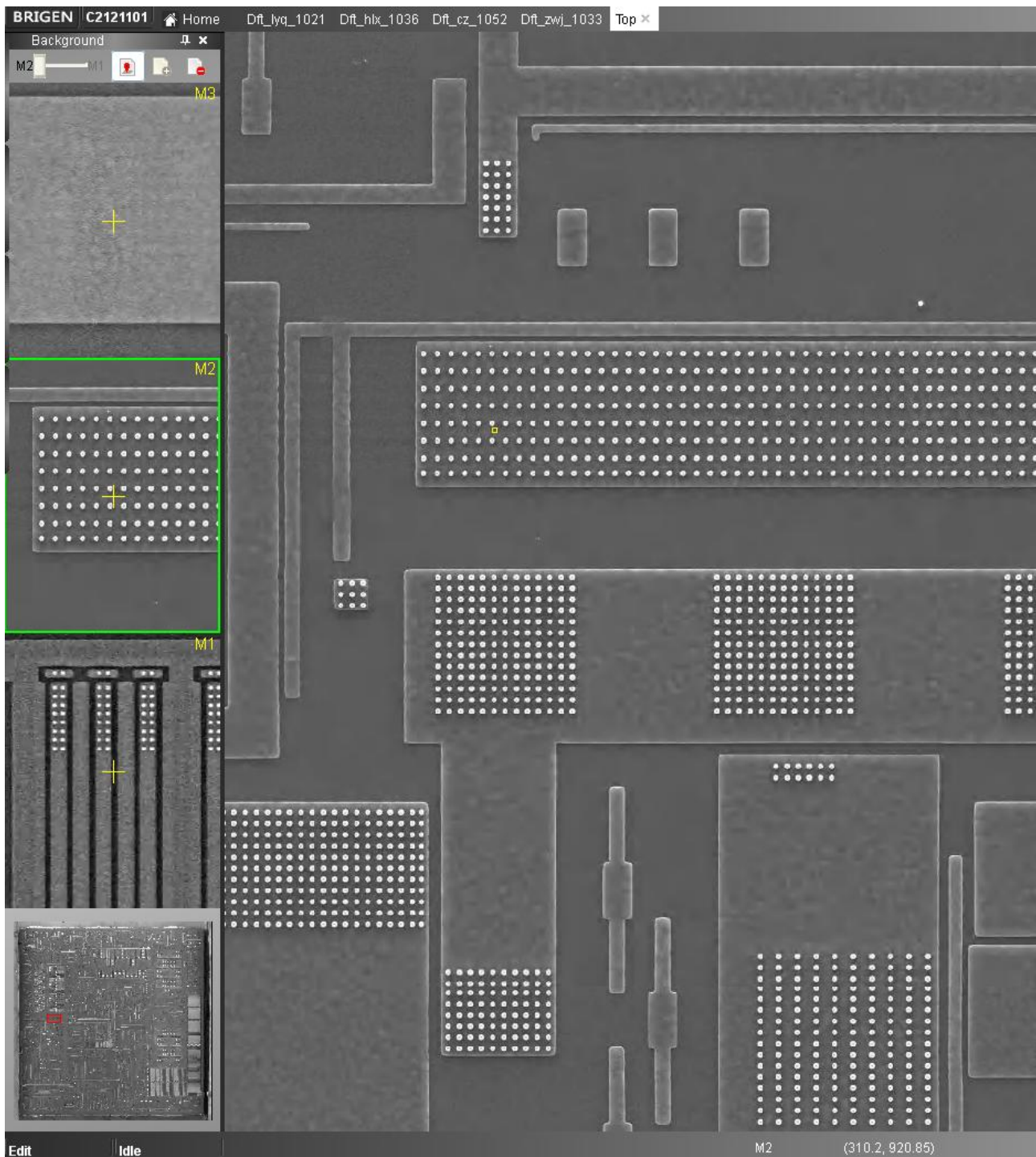
key.  is a short key for switching PL image and PS image.



Layers	Short Key
Metal 10 Image	Press F10
Metal 9 Image	Press F9
Metal 8 Image	Press F8
Metal 7 Image	Press F7
Metal 6 Image	Press F6
Metal 5 Image	Press F5
Metal 4 Image	Press F4
Metal 3 Image	Press F3
Metal 2 Image	Press F2
Metal 1 Image	Press F1
PL Image PS Image	Press  to switch PL image and PS image

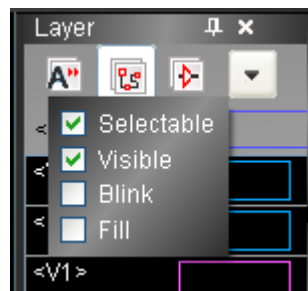
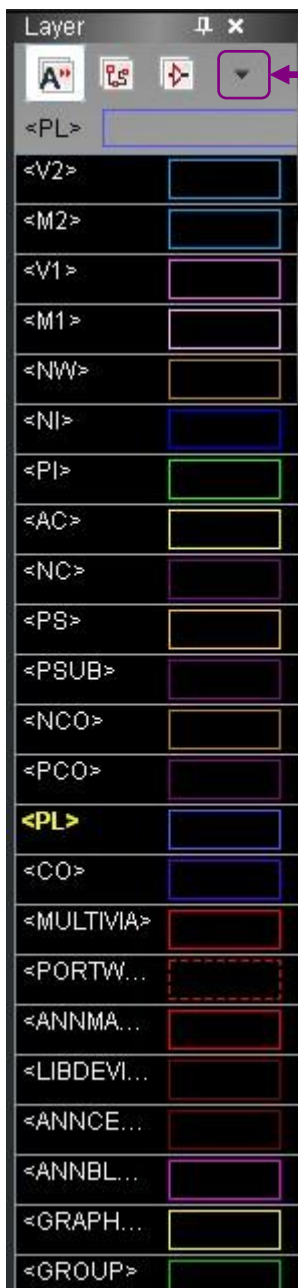


2) Method Two: Double click one layer of background window, for example M2, and the image in workspace will be switched Metal 2 layer.





## 2.8 Layer Window



Click the drop-down menu and options appear.

Layers Window includes all annotation layers.

### Icons' descriptions:



: Display all layers.



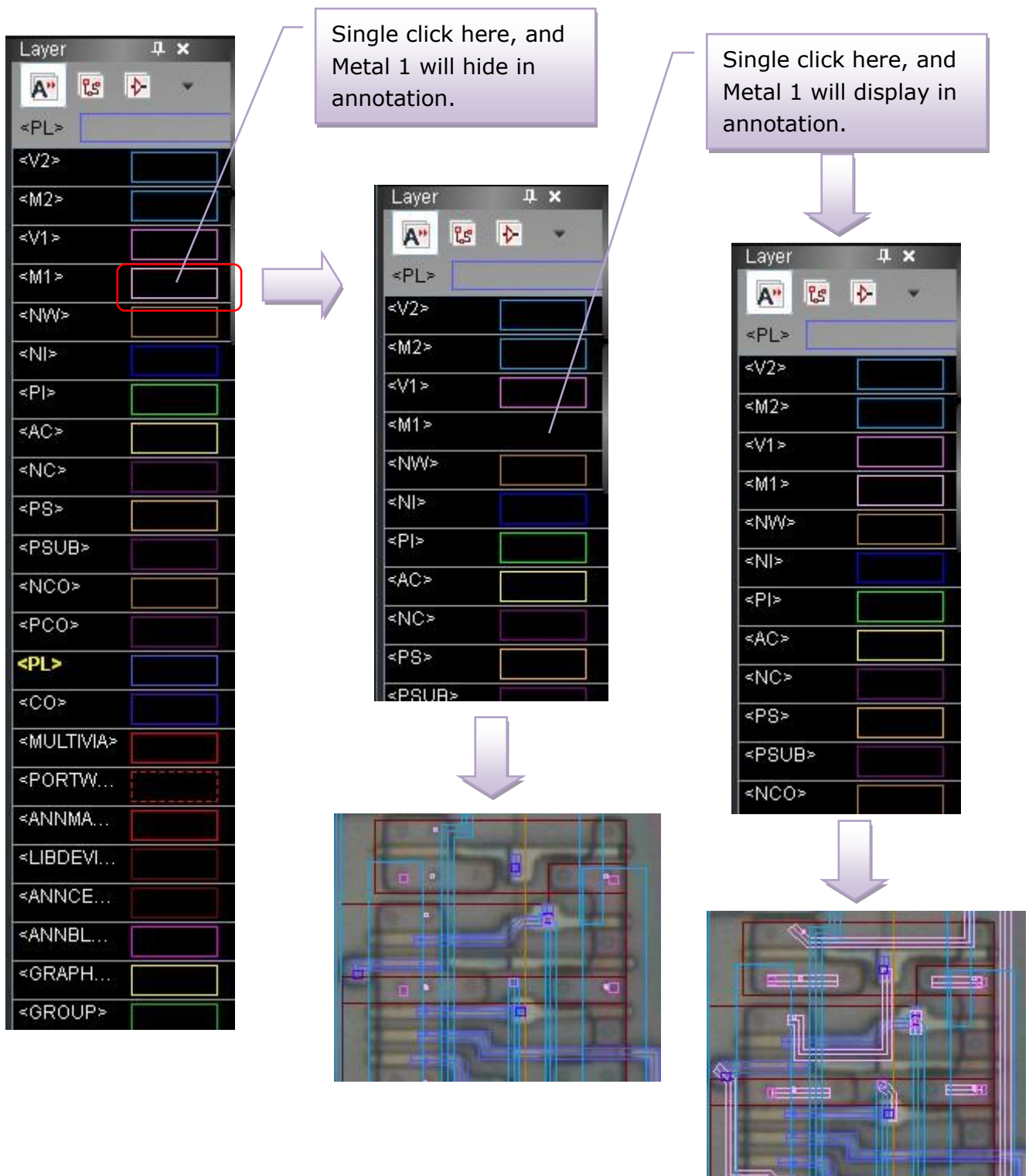
: Display device and current working layer.



: Display device only.

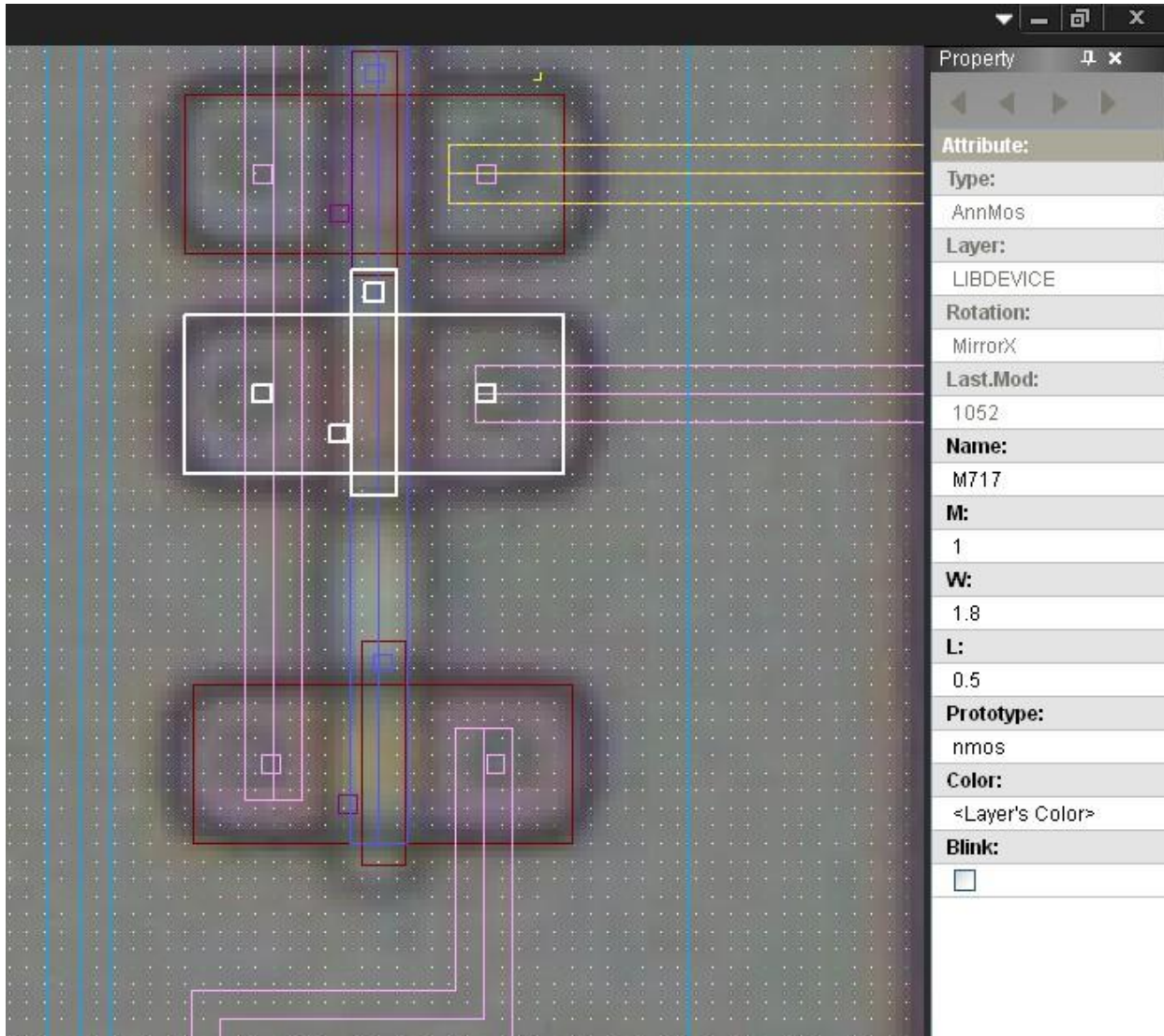
In left picture, PL is current working layer.

## 2.8.1 How to display/hide one layer



## 2.9 Property Window

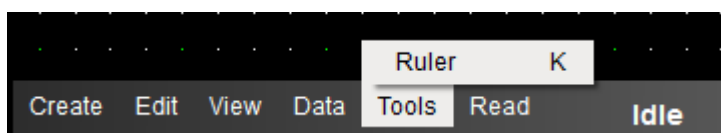
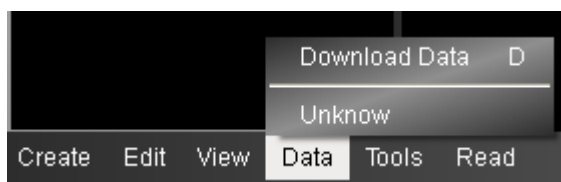
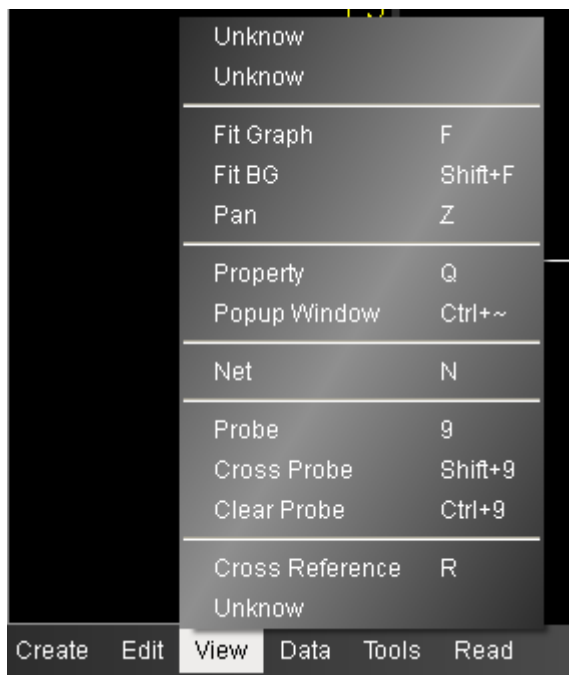
Select one device and use property window to see its property. It contains Instance Name, device type, parameter, etc.



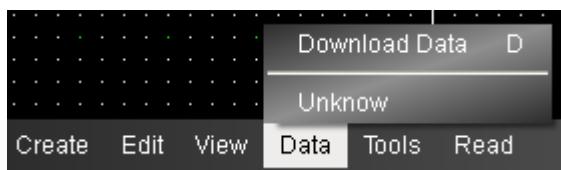
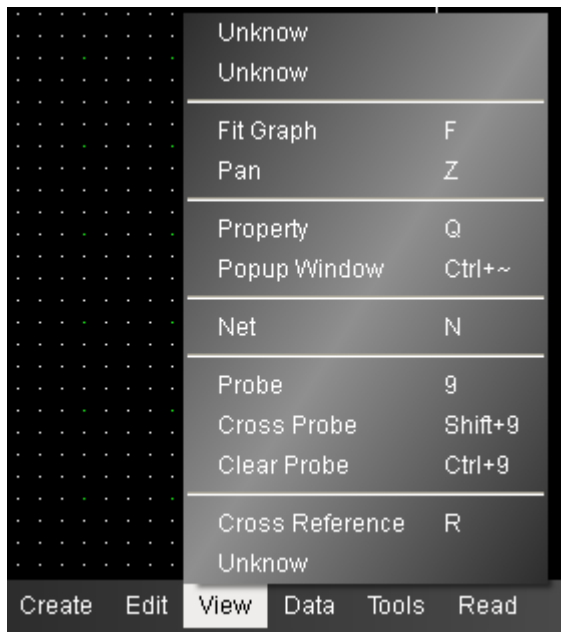
## 2.10 Menu

Brigen One is to view read only data, so “view”, “data” and “tools” are useful in menu and “create” “edit” can’t be used.

- **Menu in annotation view**

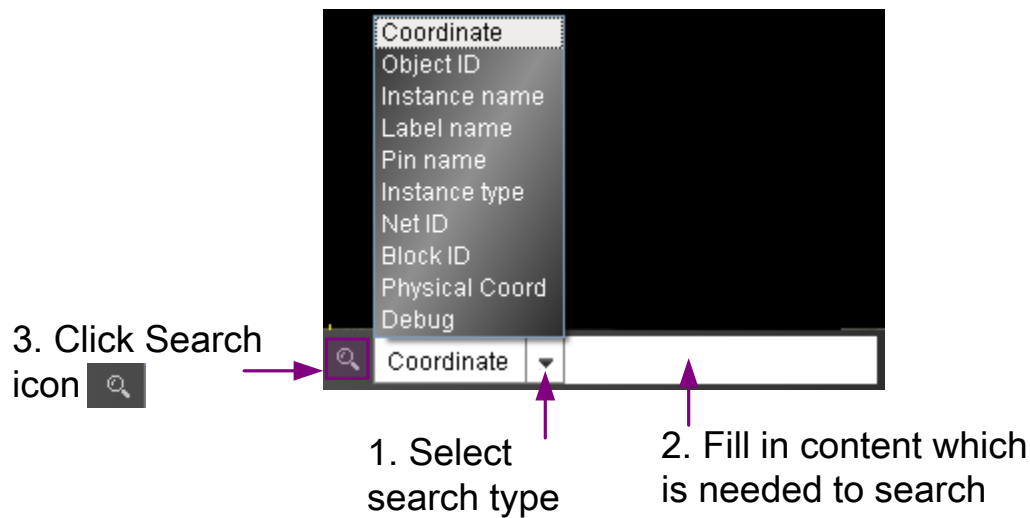


- **Menu in schematic view**






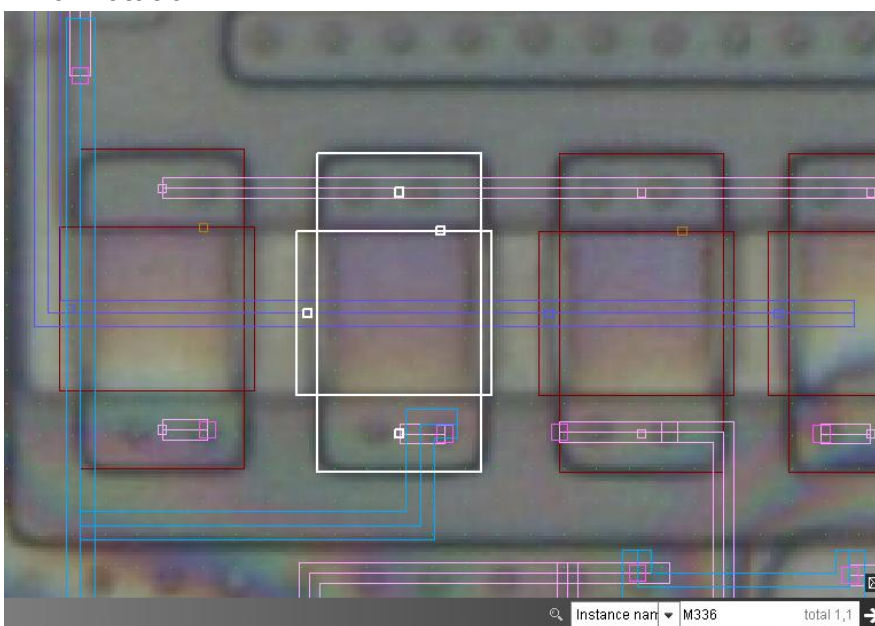
## 2.11 Search Bar



### 2.11.1 How to search element


Following is one example for searching. How to search a PMOS, M336 (Instance Name), in Top's annotation?

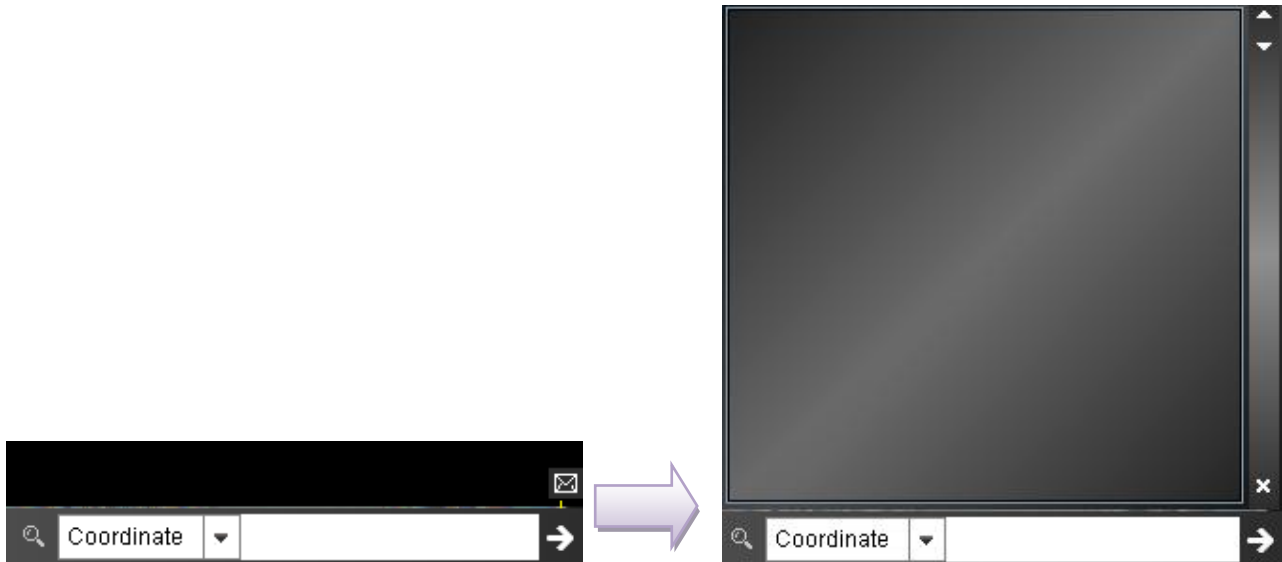
- 1) Open Top's annotation view
- 2) Select search type, Instance name
- 3) Fill in "M336"
- 4) Click Search icon  or Press "Enter" and M336 PMOS will be highlighted in Top's annotation.



## 2.12 Message Window

Click , and message window appears.

Click , and close message window.







Message Window displays messages during the operation. There are several types of information.





- Notification message: For example, "client is out of server."
- Result message: For example, "Can not get cross reference devices!"
- Warning or error message: For example, "Object selected is a global net, too large to cross!"

## 3.0 Reading Data Function

### 3.1 Short Keys in Annotation View

Function	Short Key	Function	Short Key
Fit Graph	F		
Fit BG	Shift+F		
Pan	Z		
Property	Q		
Popup Window	Ctrl+~		
Net	N		
Probe	9		
Cross Probe	Shift+9		
Clear Probe	Ctrl+9		
Cross Reference	R		
Download Data	D		
Ruler	K		
Move Left	Press [LEFT] 		
Move Right	Press [RIGHT] 		
Move Up	Press [UP] 		
Move Down	Press [DOWN] 		
Zoom In	Press Ctrl + roll up mouse wheel		
Zoom Out	Press Ctrl + roll down mouse wheel		
Continuous Zoom In	Continuously press left mouse button		
Continuous Zoom Out	Continuously press right mouse button		
Zoom Area	Press mouse right button and drag, the area with yellow border is the selected area to zoom		

## 3.2 Short Keys in Schematic View

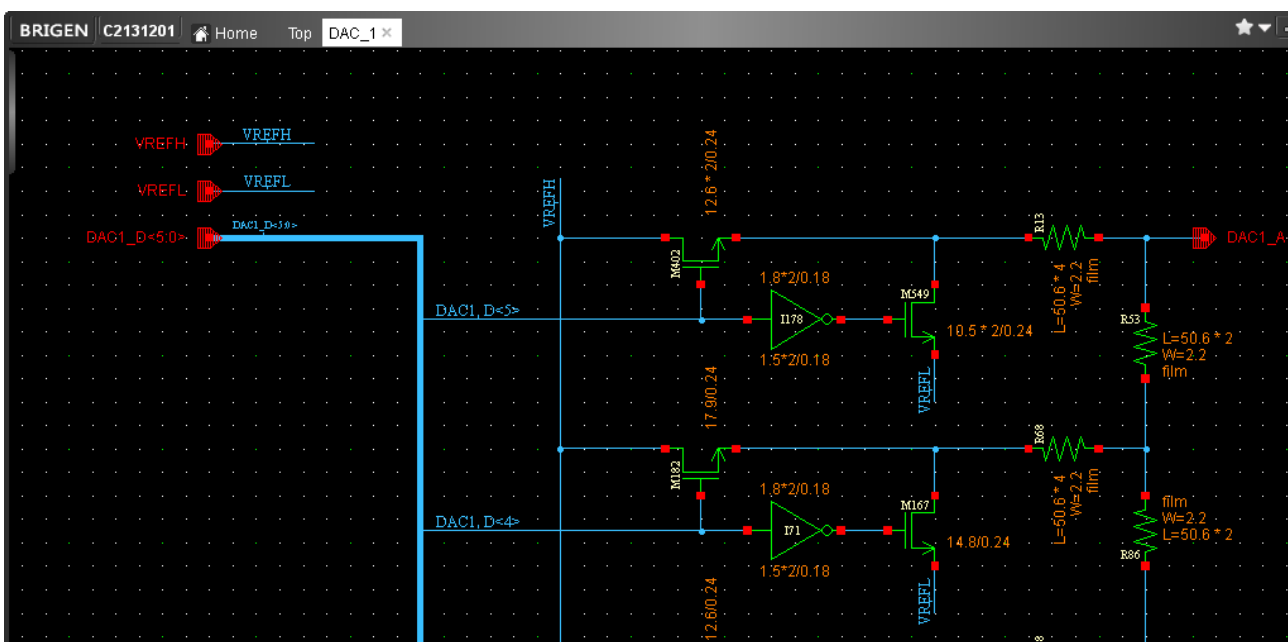
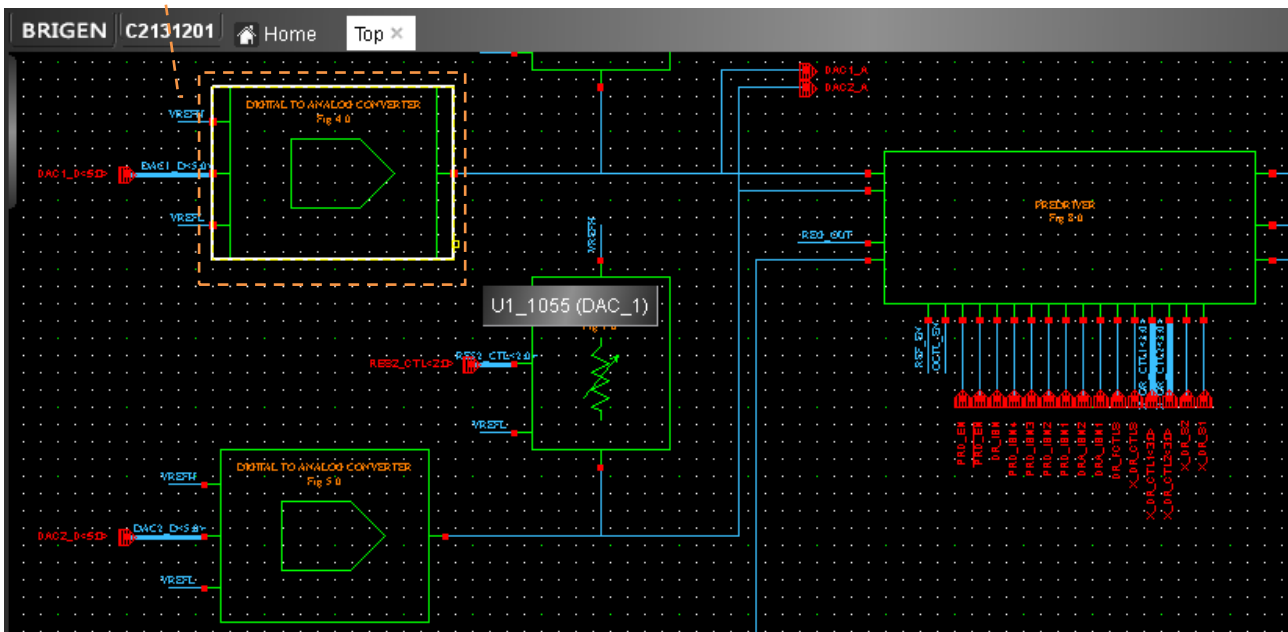
Function	Short Key	Function	Short Key
Fit Graph	F		
Pan	Z		
Property	Q		
Popup Window	Ctrl+~		
Net	N		
Probe	9		
Cross Probe	Shift+9		
Clear Probe	Ctrl+9		
Cross Reference	R		
Download Data	D		
Move Left	Press [LEFT] 		
Move Right	Press [RIGHT] 		
Move Up	Press [UP] 		
Move Down	Press [DOWN] 		
Zoom In	Press Ctrl + roll up mouse wheel		
Zoom Out	Press Ctrl + roll down mouse wheel		
Continuous Zoom In	Continuously press left mouse button		
Continuous Zoom Out	Continuously press right mouse button		
Zoom Area	Press mouse right button and drag, the area with yellow border is the selected area to zoom		



## 3.3 Descend and Return

### 3.3.1 Descend

Double click LibDevice which has schematic and symbol views in schematic view and it will be descended in LibDevice's schematic view.

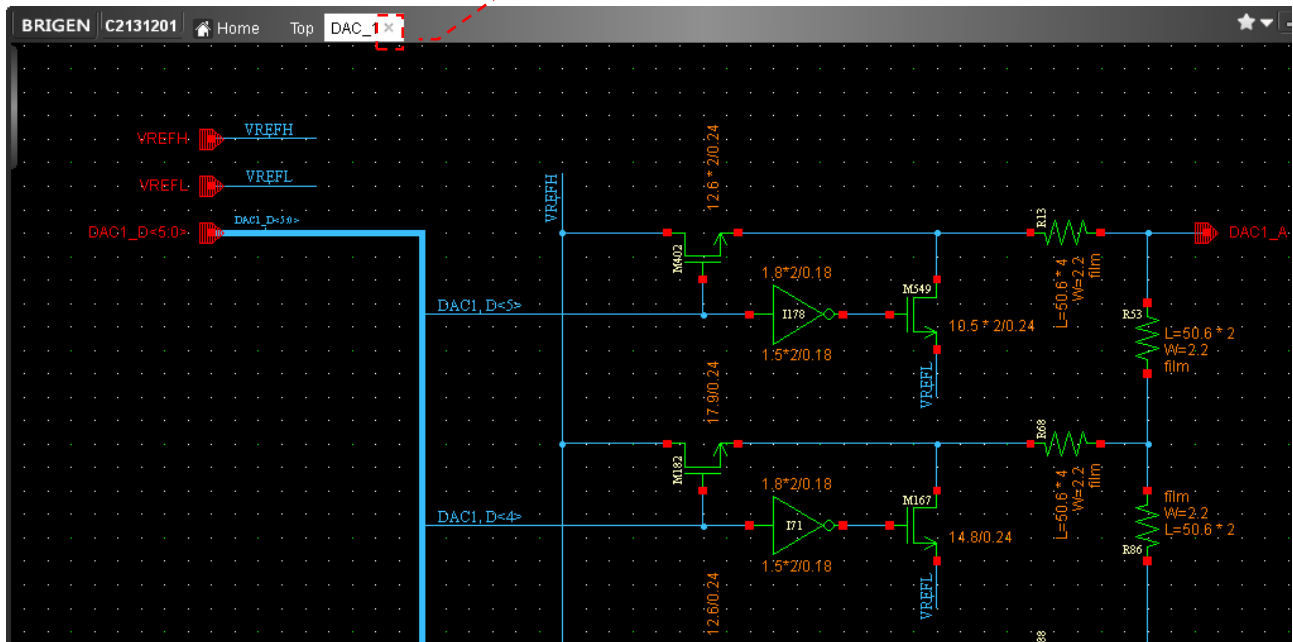


### 3.3.2 Return

There is no return function in Brigen One.

Descend is to open a new view.

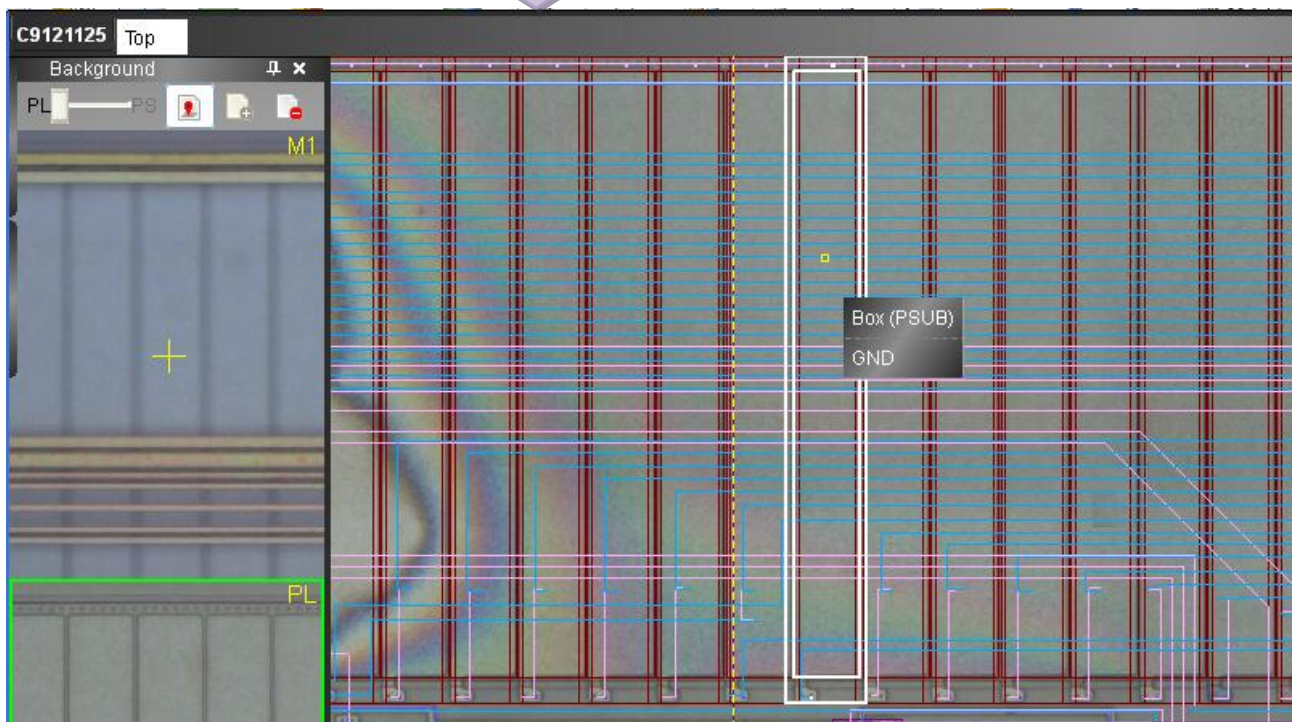
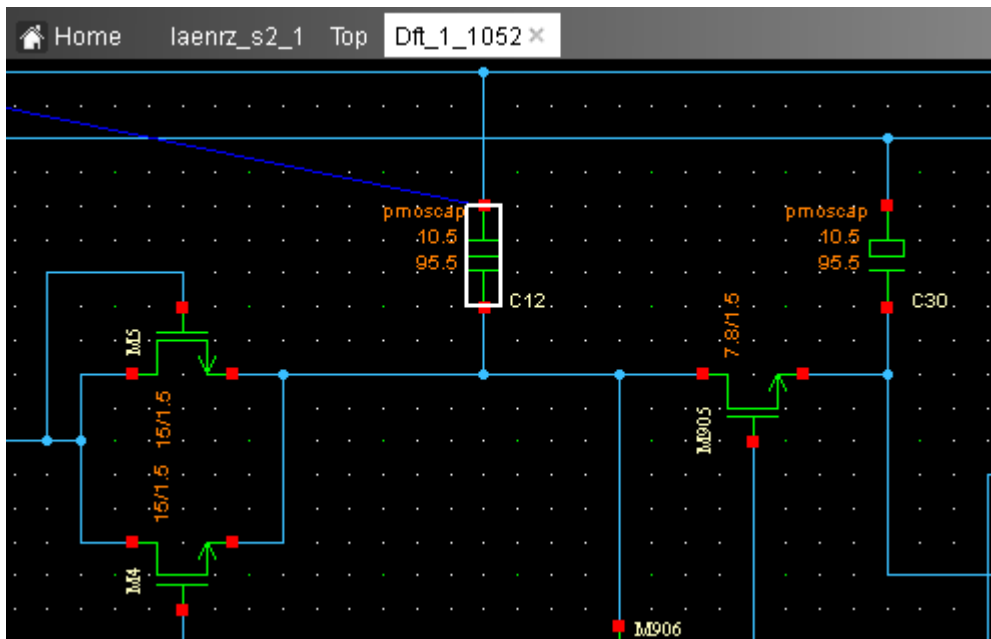
Click "x" to close the view.



## 3.4 Cross Reference

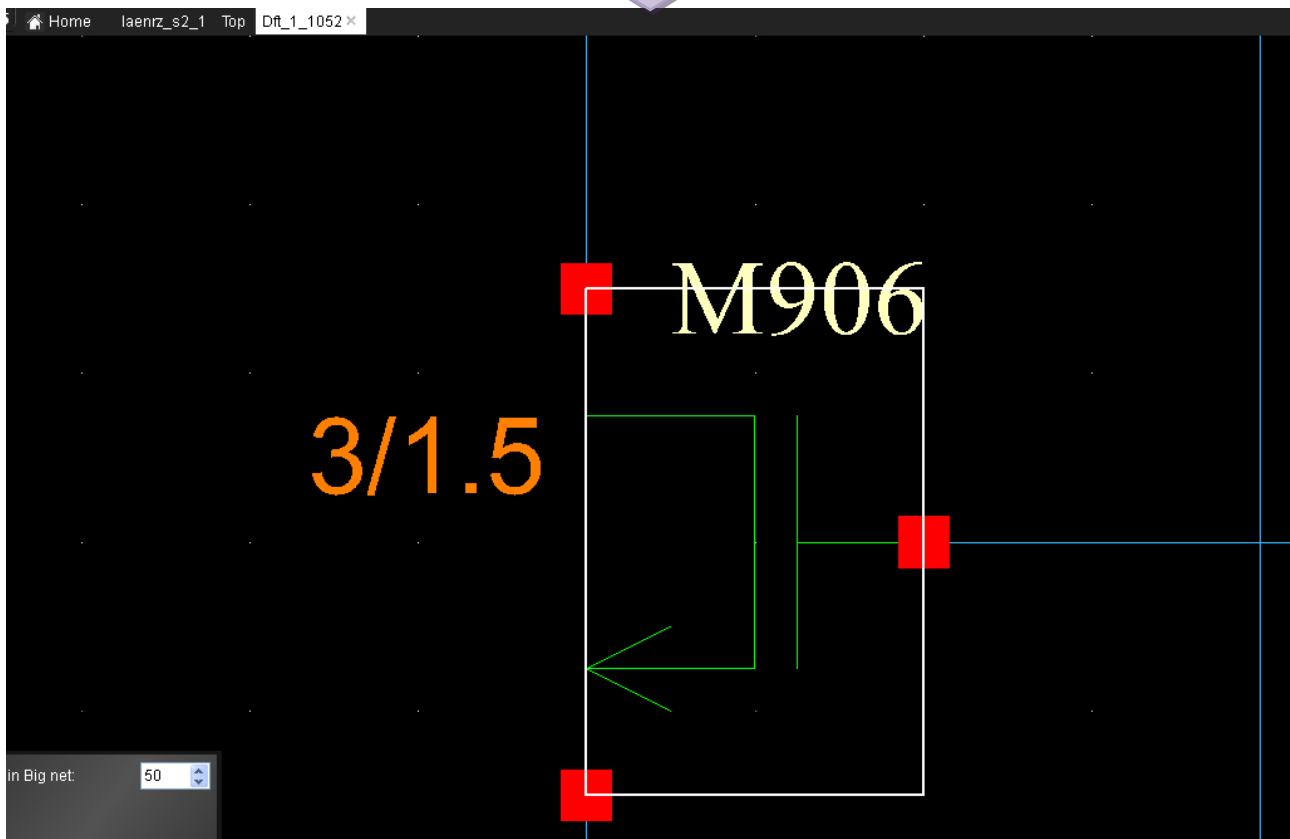
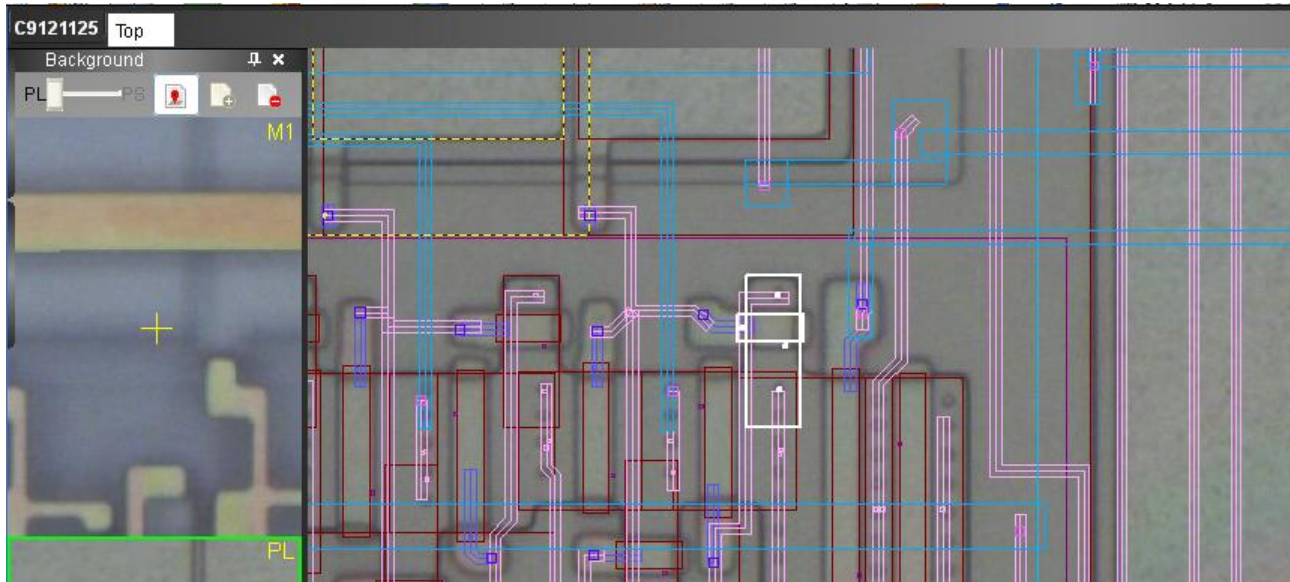
### 3.4.1 Schematic View to Annotation View

Select an instance in a schematic view, for example "C12", then press "R". C12 will be highlighted in Top annotation view.



### 3.4.2 Annotation View to Schematic View

Select an instance in Top's annotation view, for example "M906", then press "R". M906 will be highlighted in its schematic view.

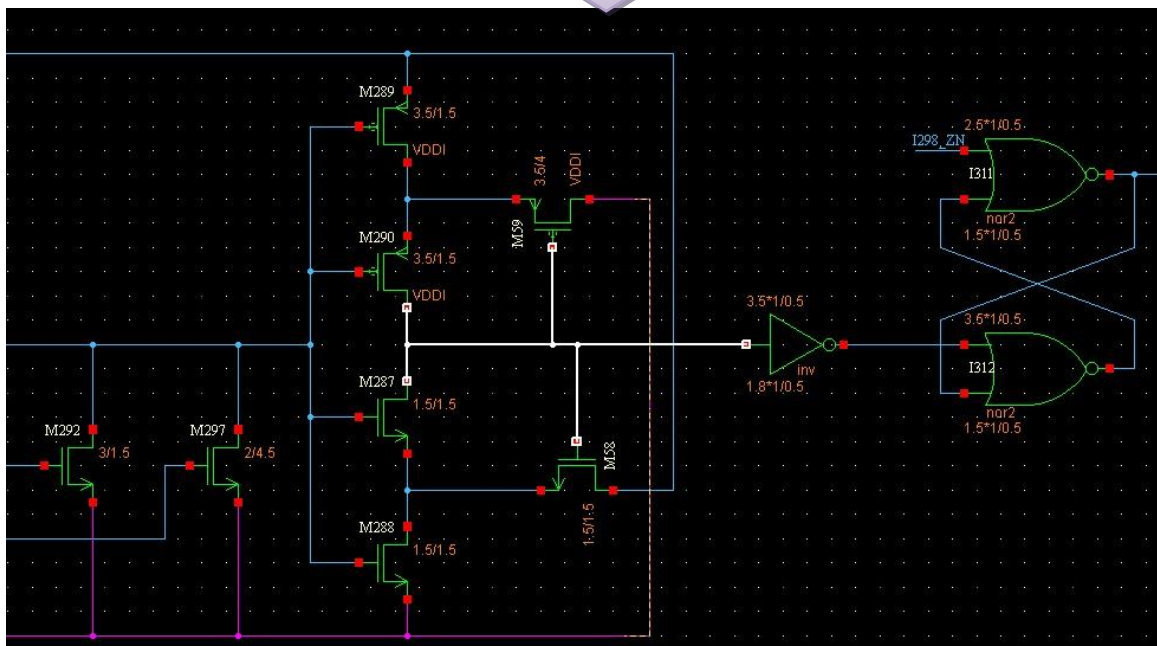
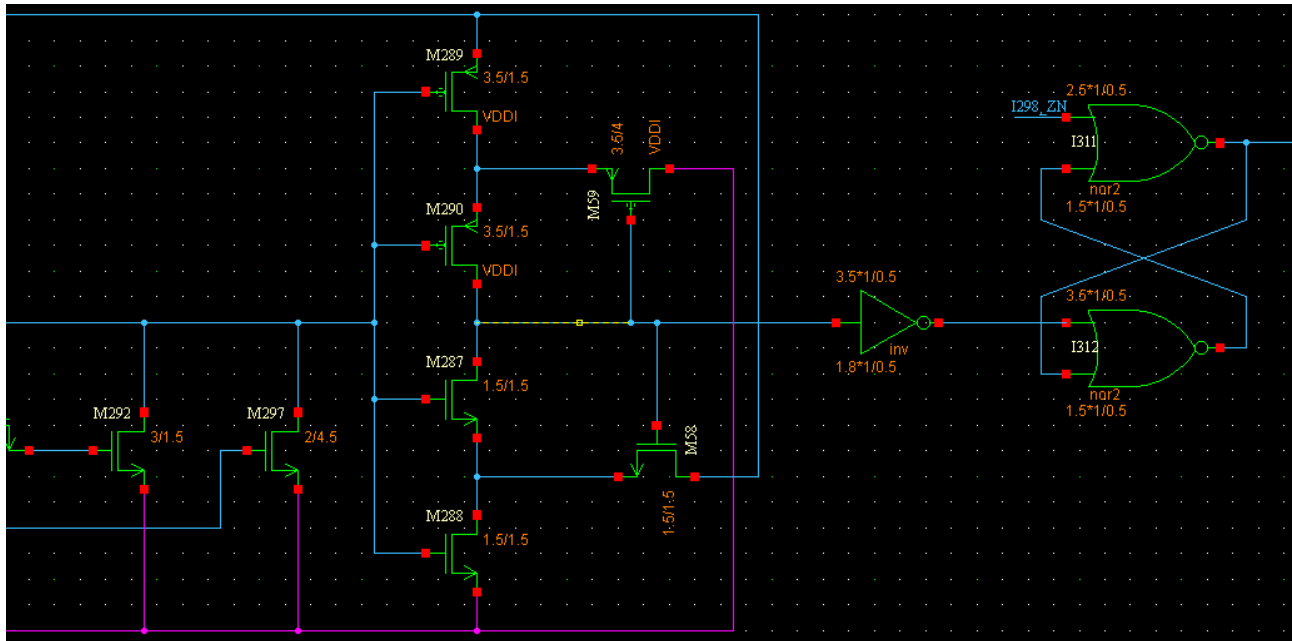


## 3.5 Net and Probe

### 3.5.1 Net

Net function is to highlight a whole net.

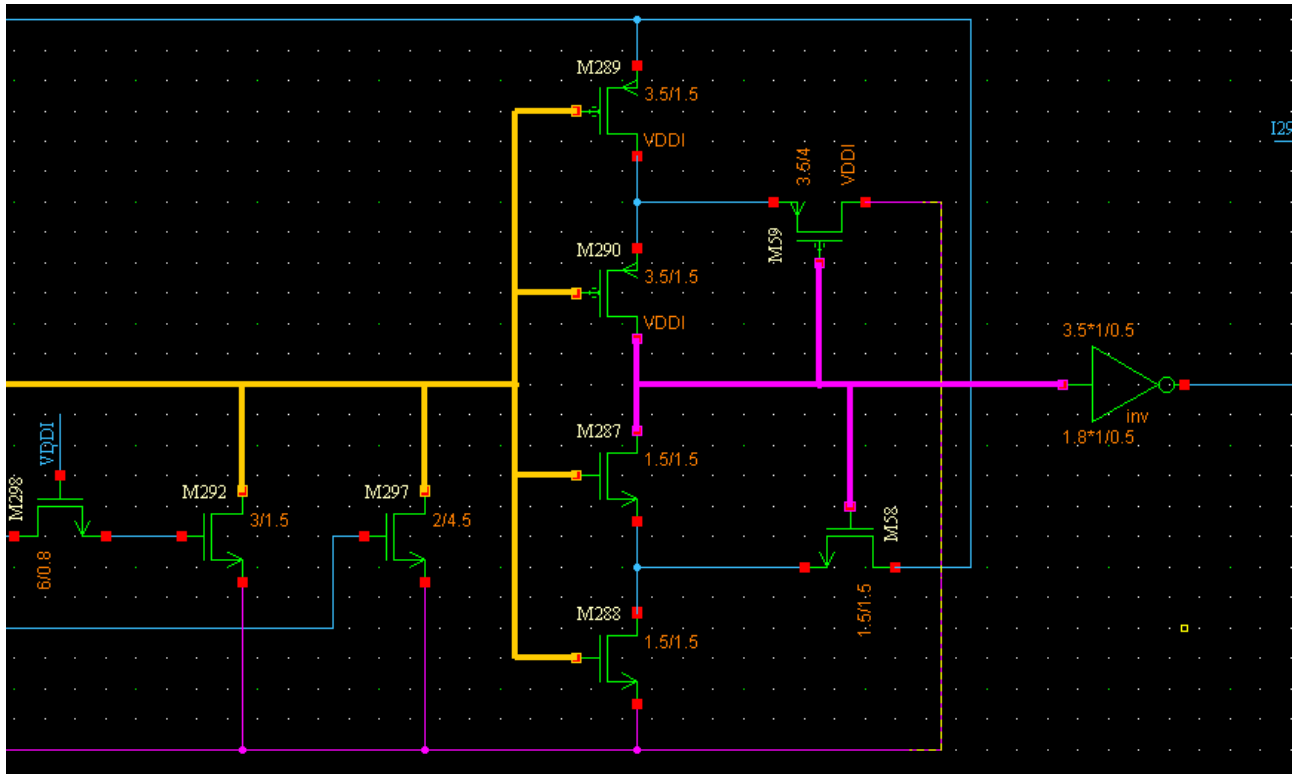
Move your cursor to a net, then press "N". This net will be highlighted and selected.





### 3.5.2 Probe

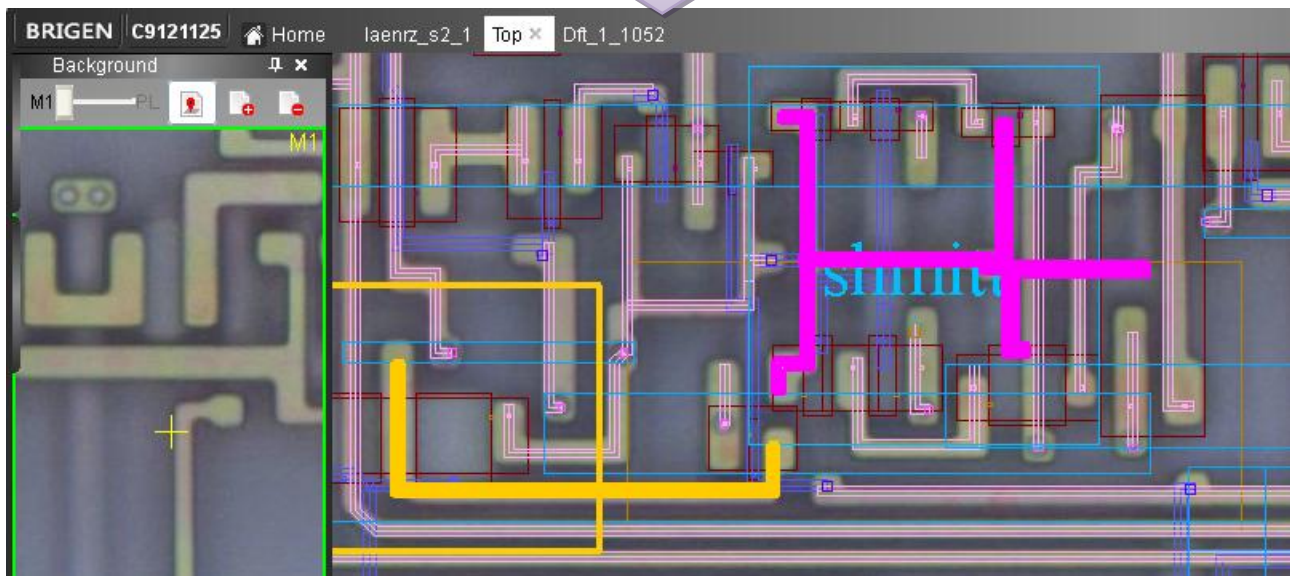
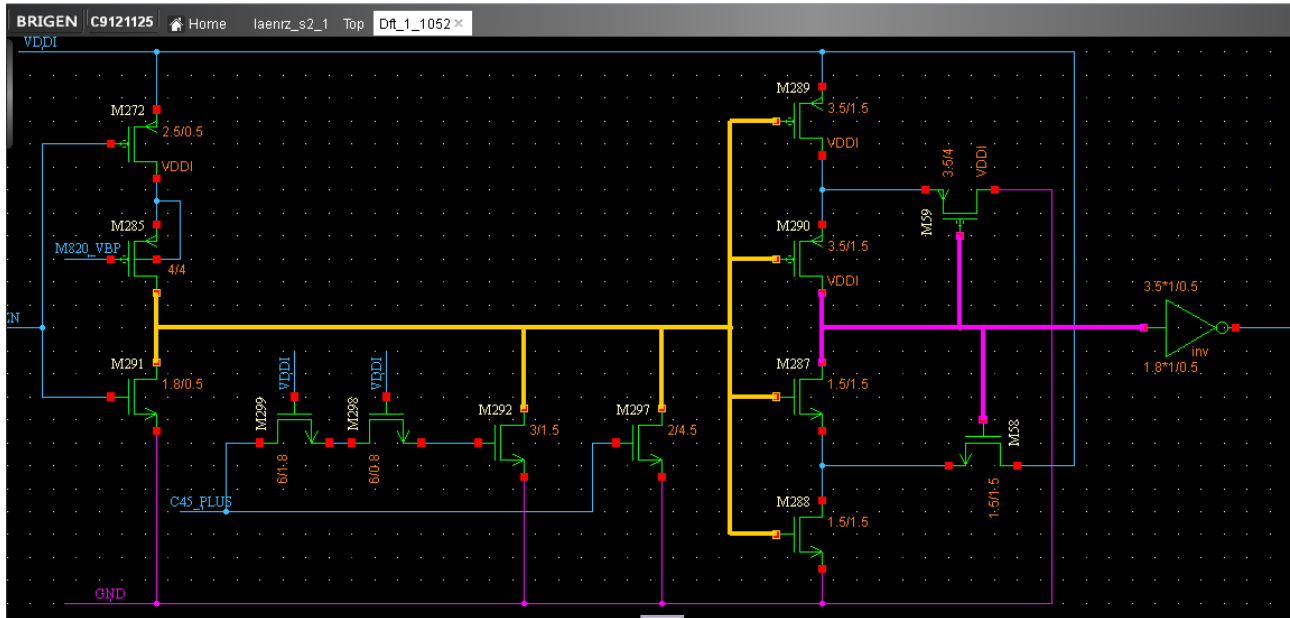
Probe function is also to highlight a whole net, and different nets will become different colors. Move your cursor to a net, and then press "9". This net will be highlighted.



### 3.5.3 Cross Probe

Cross Probe function is not only to highlight a whole net in schematic view, but also to highlight this net in annotation view.

Move your cursor to a net, and then press "Shift+9".

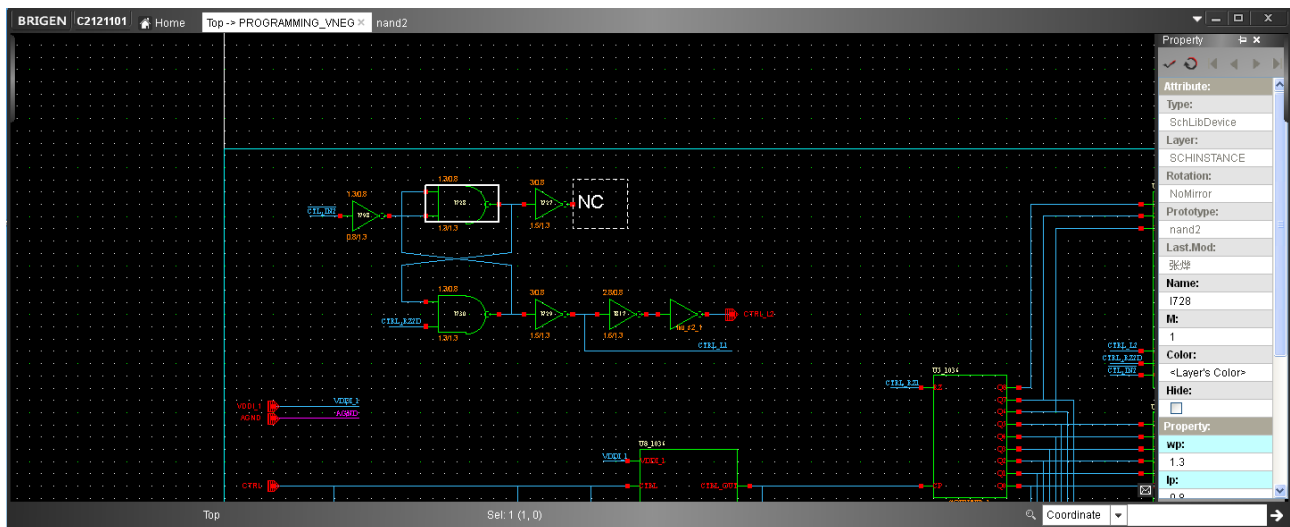
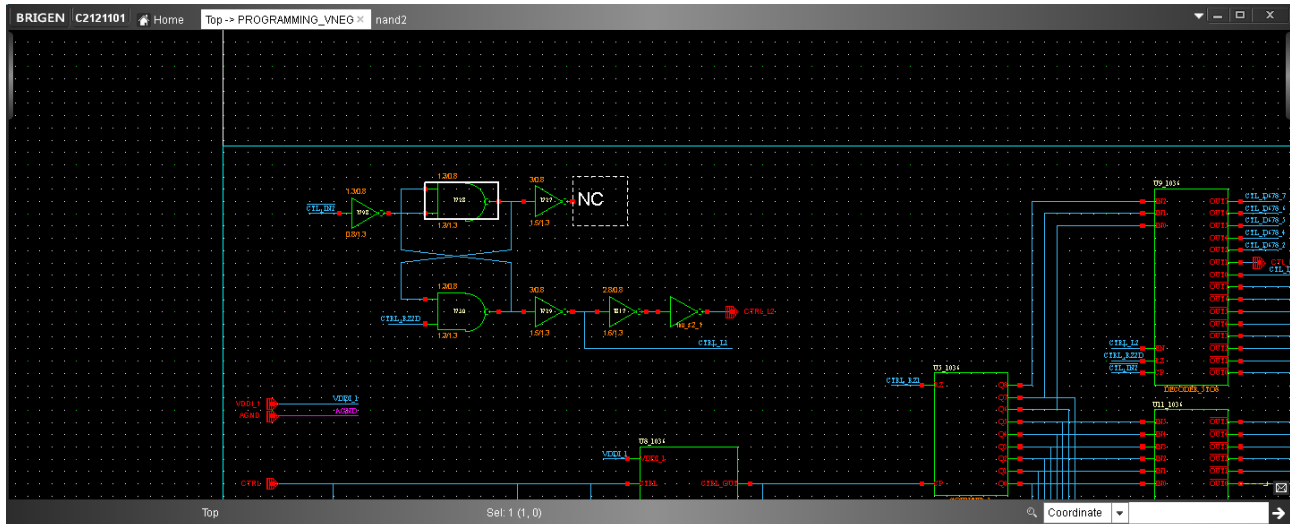


### 3.5.4 Clear Probe

Press "Ctrl+9" to clear all probe and cross probe.

## 3.6 Property

Select a component, and then press “Q”. The property dockwindow will appear.



### 3.7 Ruler

In annotation view, press “K”, ruler function will be active.  
Press Esc to exit the ruler function.

