

# Package ‘interacCircos’

April 7, 2023

**Type** Package

**Title** The Generation of Interactive Circos Plot

**Description** Implement in an efficient approach to display the genomic data, relationship, information in an interactive circular genome(Circos) plot. 'interacCircos' are inspired by 'circosJS', 'BioCircos.js' and 'NG-Circos' and we integrate the modules of 'circosJS', 'BioCircos.js' and 'NG-Circos' into this R package, based on 'htmlwidgets' framework.

**Version** 1.8.0

**License** GPL-3

**Encoding** UTF-8

**LazyData** true

**Depends** R (>= 4.1)

**Imports** RColorBrewer, htmlwidgets, plyr, methods

**RoxygenNote** 7.1.1

**Suggests** knitr, rmarkdown

**VignetteBuilder** knitr

**biocViews** Visualization

**git\_url** <https://git.bioconductor.org/packages/interacCircos>

**git\_branch** RELEASE\_3\_16

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arcExample

*Arc plot example data*


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## Description

The data is in matrix with column names

## Usage

```
arcExample
```

**Format**

A data frame with 7 columns:

**chr** chromosome

**start** start position

**end** end position

**color** color

**des** description

**link** hyperlink

**html** The external html language

---

bubbleExample

*Bubble plot example data*

---

**Description**

The data is in matrix with column names

**Usage**

bubbleExample

**Format**

A data frame with 8 columns:

**chr** chromosome

**start** start position

**end** end position

**name** name for description

**value** value

**color** specified color for bubble

**layer** layer number

**html** The external html language

---

|                |                                               |
|----------------|-----------------------------------------------|
| chord.pExample | <i>Example data of chord plot of circosJS</i> |
|----------------|-----------------------------------------------|

---

### Description

The data is in matrix with column names

### Usage

```
chord.pExample
```

### Format

A data frame in which each row represents the relationship from one genome position(source) to another one(target):

**source\_chr** chromosome name of source

**source\_start** start position of source

**source\_end** end position of source

**target\_chr** chromosome name of target

**target\_start** start position of target

**target\_end** end position of target

---

|              |                                                |
|--------------|------------------------------------------------|
| chordExample | <i>Example data of chord plot of NG-Circos</i> |
|--------------|------------------------------------------------|

---

### Description

The data is in matrix with column names. The order and number is same as column, representing the same items

### Usage

```
chordExample
```

### Format

A data frame in which each value represents the relationship from a column to a row:

**C.CK** Genome 1, the name for each arc

**C.NPK** Genome 2, the name for each arc

**GC.CK** Genome 2, the name for each arc

**GC.NPK** Genome 2, the name for each arc

**Alphaproteobacteria** Genome 2, the name for each arc  
**Betaproteobacteria** Genome 2, the name for each arc  
**Gammaproteobacteria** Genome 2, the name for each arc  
**Deltaproteobacteria** Genome 8, the name for each arc  
**Acidobacteria** Genome 9, the name for each arc  
**Actinobacteria** Genome 10, the name for each arc  
**Bacteroidetes** Genome 11, the name for each arc  
**Chloroflexi** Genome 12, the name for each arc  
**Firmicutes** Genome 13, the name for each arc  
**Gemmatimonadetes** Genome 14, the name for each arc  
**Planctomycetes** Genome 15, the name for each arc  
**Thaumarchaeota** Genome 16, the name for each arc  
**Verrucomicrobia** Genome 17, the name for each arc  
**Ascomycota** Genome 18, the name for each arc  
**Basidiomycota** Genome 19, the name for each arc  
**Zygomycota** Genome 20, the name for each arc

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Circos

*interacCircos*


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## Description

Visualization of Interactive Circos Plot

## Usage

```

Circos(
  moduleList = CircosModuleList(),
  genome = "hg19",
  genome2 = "hg19",
  genomeFillColor = "Spectral",
  chrPad = 0.02,
  width = NULL,
  height = NULL,
  innerRadius = 216,
  outerRadius = 240,
  svgClassName = "interacCircos",
  displayGenomeBorder = TRUE,
  genomeBorderColor = "#000",
  genomeBorderSize = 0.5,
  genomeTicksDisplay = FALSE,
  genomeTicksLen = 5,

```

```
genomeTicksColor = "#000",
genomeTicksTextSize = "0.6em",
genomeTicksRealLength = TRUE,
genomeTicksTextColor = "#000",
genomeTicksScale = 3e+07,
genomeTicksOffset = 0,
genomeLabelDisplay = TRUE,
genomeLabelTextSize = "10pt",
genomeLabelTextColor = "#000",
genomeLabelDx = 0,
genomeLabelDy = 0,
compareEvent = FALSE,
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compareEventGroupDistance = 0,
zoom = TRUE,
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SNPMouseCombinationImageTitleColor = "black",
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SNPMouseCombinationImageWidth = 300,
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SNPMouseCombinationGraphTitle = "This is graph",
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```

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```

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LINEMouseOverTooltipsOpacity = 1,
WIGMouseEvent = TRUE,
WIGMouseClickDisplay = FALSE,
WIGMouseClickLineOpacity = 1,
WIGMouseClickLineStrokeColor = "none",
WIGMouseClickLineStrokeWidth = "none",
WIGMouseClickFillColor = "none",
WIGMouseDownDisplay = FALSE,
WIGMouseDownLineOpacity = 1,
WIGMouseDownLineStrokeColor = "none",
WIGMouseDownLineStrokeWidth = "none",
WIGMouseDownFillColor = "none",
WIGMouseEnterDisplay = FALSE,
```

```
WIGMouseEnterLineOpacity = 1,
WIGMouseEnterLineStrokeColor = "none",
WIGMouseEnterLineStrokeWidth = "none",
WIGMouseEnterFillColor = "none",
WIGMouseLeaveDisplay = FALSE,
WIGMouseLeaveLineOpacity = 1,
WIGMouseLeaveLineStrokeColor = "none",
WIGMouseLeaveLineStrokeWidth = "none",
WIGMouseLeaveFillColor = "none",
WIGMouseMoveDisplay = FALSE,
WIGMouseMoveLineOpacity = 1,
WIGMouseMoveLineStrokeColor = "none",
WIGMouseMoveLineStrokeWidth = "none",
WIGMouseMoveFillColor = "none",
WIGMouseOutDisplay = FALSE,
WIGMouseOutAnimationTime = 500,
WIGMouseOutLineOpacity = 1,
WIGMouseOutLineStrokeColor = "none",
WIGMouseOutLineStrokeWidth = "none",
WIGMouseOutFillColor = "none",
WIGMouseUpDisplay = FALSE,
WIGMouseUpLineOpacity = 1,
WIGMouseUpLineStrokeColor = "none",
WIGMouseUpLineStrokeWidth = "none",
WIGMouseUpFillColor = "none",
WIGMouseOverDisplay = FALSE,
WIGMouseOverLineOpacity = 1,
WIGMouseOverLineStrokeColor = "none",
WIGMouseOverLineStrokeWidth = "none",
WIGMouseOverFillColor = "none",
WIGMouseOverTooltipsSetting = "style1",
WIGMouseOverTooltipsHtml = " ",
WIGMouseOverTooltipsPosition = "absolute",
WIGMouseOverTooltipsBackgroundColor = "white",
WIGMouseOverTooltipsBorderStyle = "solid",
WIGMouseOverTooltipsBorderWidth = 0,
WIGMouseOverTooltipsPadding = "3px",
WIGMouseOverTooltipsBorderRadius = "3px",
WIGMouseOverTooltipsOpacity = 1,
SCATTERxlink = FALSE,
SCATTERMouseEvent = TRUE,
SCATTERMouseClickDisplay = FALSE,
SCATTERMouseClickColor = "red",
SCATTERMouseClickCircleSize = 2,
SCATTERMouseClickCircleOpacity = 1,
SCATTERMouseClickCircleStrokeColor = "none",
SCATTERMouseClickCircleStrokeWidth = "none",
SCATTERMouseClickTextFromData = "fourth",
```



```
SCATTERMouseClickTextOpacity = 1,  
SCATTERMouseClickTextColor = "red",  
SCATTERMouseClickTextSize = 8,  
SCATTERMouseClickTextPostionX = 1,  
SCATTERMouseClickTextPostionY = 10,  
SCATTERMouseClickTextDrag = TRUE,  
SCATTERMouseDownDisplay = FALSE,  
SCATTERMouseDownColor = "red",  
SCATTERMouseDownCircleSize = 2,  
SCATTERMouseDownCircleOpacity = 1,  
SCATTERMouseDownCircleStrokeColor = "none",  
SCATTERMouseDownCircleStrokeWidth = "none",  
SCATTERMouseEnterDisplay = FALSE,  
SCATTERMouseEnterColor = "red",  
SCATTERMouseEnterCircleSize = 2,  
SCATTERMouseEnterCircleOpacity = 1,  
SCATTERMouseEnterCircleStrokeColor = "none",  
SCATTERMouseEnterCircleStrokeWidth = "none",  
SCATTERMouseLeaveDisplay = FALSE,  
SCATTERMouseLeaveColor = "red",  
SCATTERMouseLeaveCircleSize = 2,  
SCATTERMouseLeaveCircleOpacity = 1,  
SCATTERMouseLeaveCircleStrokeColor = "none",  
SCATTERMouseLeaveCircleStrokeWidth = "none",  
SCATTERMouseMoveDisplay = FALSE,  
SCATTERMouseMoveColor = "red",  
SCATTERMouseMoveCircleSize = 2,  
SCATTERMouseMoveCircleOpacity = 1,  
SCATTERMouseMoveCircleStrokeColor = "none",  
SCATTERMouseMoveCircleStrokeWidth = "none",  
SCATTERMouseOutDisplay = FALSE,  
SCATTERMouseOutAnimationTime = 500,  
SCATTERMouseOutColor = "red",  
SCATTERMouseOutCircleSize = 2,  
SCATTERMouseOutCircleOpacity = 1,  
SCATTERMouseOutCircleStrokeColor = "none",  
SCATTERMouseOutCircleStrokeWidth = "none",  
SCATTERMouseUpDisplay = FALSE,  
SCATTERMouseUpColor = "red",  
SCATTERMouseUpCircleSize = 2,  
SCATTERMouseUpCircleOpacity = 1,  
SCATTERMouseUpCircleStrokeColor = "none",  
SCATTERMouseUpCircleStrokeWidth = "none",  
SCATTERMouseOverDisplay = FALSE,  
SCATTERMouseOverColor = "red",  
SCATTERMouseOverCircleSize = 2,  
SCATTERMouseOverCircleOpacity = 1,  
SCATTERMouseOverCircleStrokeColor = "none",
```

```
SCATTERMouseOverCircleStrokeWidth = "none",
SCATTERMouseOverTooltipsSetting = "style1",
SCATTERMouseOverTooltipsHtml = " ",
SCATTERMouseOverTooltipsPosition = "absolute",
SCATTERMouseOverTooltipsBackgroundColor = "white",
SCATTERMouseOverTooltipsBorderStyle = "solid",
SCATTERMouseOverTooltipsBorderWidth = 0,
SCATTERMouseOverTooltipsPadding = "3px",
SCATTERMouseOverTooltipsBorderRadius = "3px",
SCATTERMouseOverTooltipsOpacity = 1,
ARCxlink = FALSE,
ARCMouseEvent = TRUE,
ARCMouseClickDisplay = FALSE,
ARCMouseClickColor = "red",
ARCMouseClickArcOpacity = 1,
ARCMouseClickArcStrokeColor = "none",
ARCMouseClickArcStrokeWidth = "none",
ARCMouseClickTextFromData = "fourth",
ARCMouseClickTextOpacity = 1,
ARCMouseClickTextColor = "red",
ARCMouseClickTextSize = 8,
ARCMouseClickTextPostionX = 1,
ARCMouseClickTextPostionY = 10,
ARCMouseClickTextDrag = TRUE,
ARCMouseDownDisplay = FALSE,
ARCMouseDownColor = "red",
ARCMouseDownArcOpacity = 1,
ARCMouseDownArcStrokeColor = "none",
ARCMouseDownArcStrokeWidth = "none",
ARCMouseEnterDisplay = FALSE,
ARCMouseEnterColor = "red",
ARCMouseEnterArcOpacity = 1,
ARCMouseEnterArcStrokeColor = "none",
ARCMouseEnterArcStrokeWidth = "none",
ARCMouseLeaveDisplay = FALSE,
ARCMouseLeaveColor = "red",
ARCMouseLeaveArcOpacity = 1,
ARCMouseLeaveArcStrokeColor = "none",
ARCMouseLeaveArcStrokeWidth = "none",
ARCMouseMoveDisplay = FALSE,
ARCMouseMoveColor = "red",
ARCMouseMoveArcOpacity = 1,
ARCMouseMoveArcStrokeColor = "none",
ARCMouseMoveArcStrokeWidth = "none",
ARCMouseOutDisplay = FALSE,
ARCMouseOutAnimationTime = 500,
ARCMouseOutColor = "red",
ARCMouseOutArcOpacity = 1,
```

```
ARCMouseOutArcStrokeColor = "none",
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ARCMouseUpDisplay = FALSE,
ARCMouseUpColor = "red",
ARCMouseUpArcOpacity = 1,
ARCMouseUpArcStrokeColor = "none",
ARCMouseUpArcStrokeWidth = "none",
ARCMouseOverDisplay = FALSE,
ARCMouseOverColor = "red",
ARCMouseOverArcOpacity = 1,
ARCMouseOverArcStrokeColor = "none",
ARCMouseOverArcStrokeWidth = "none",
ARCMouseOverTooltipsSetting = "style1",
ARCMouseOverTooltipsHtml = " ",
ARCMouseOverTooltipsPosition = "absolute",
ARCMouseOverTooltipsBackgroundColor = "white",
ARCMouseOverTooltipsBorderStyle = "solid",
ARCMouseOverTooltipsBorderWidth = 0,
ARCMouseOverTooltipsPadding = "3px",
ARCMouseOverTooltipsBorderRadius = "3px",
ARCMouseOverTooltipsOpacity = 1,
GENExlink = FALSE,
GENEMouseEvent = TRUE,
GENEMouseClickDisplay = FALSE,
GENEMouseClickColor = "red",
GENEMouseClickArcOpacity = 1,
GENEMouseClickArcStrokeColor = "none",
GENEMouseClickArcStrokeWidth = "none",
GENEMouseClickTextFromData = "fourth",
GENEMouseClickTextOpacity = 1,
GENEMouseClickTextColor = "red",
GENEMouseClickTextSize = 8,
GENEMouseClickTextPostionX = 1,
GENEMouseClickTextPostionY = 10,
GENEMouseClickTextDrag = TRUE,
GENEMouseDownDisplay = FALSE,
GENEMouseDownColor = "red",
GENEMouseDownArcOpacity = 1,
GENEMouseDownArcStrokeColor = "none",
GENEMouseDownArcStrokeWidth = "none",
GENEMouseEnterDisplay = FALSE,
GENEMouseEnterColor = "red",
GENEMouseEnterArcOpacity = 1,
GENEMouseEnterArcStrokeColor = "none",
GENEMouseEnterArcStrokeWidth = "none",
GENEMouseLeaveDisplay = FALSE,
GENEMouseLeaveColor = "red",
GENEMouseLeaveArcOpacity = 1,
```

```
GENEMouseLeaveArcStrokeColor = "none",
GENEMouseLeaveArcStrokeWidth = "none",
GENEMouseMoveDisplay = FALSE,
GENEMouseMoveColor = "red",
GENEMouseMoveArcOpacity = 1,
GENEMouseMoveArcStrokeColor = "none",
GENEMouseMoveArcStrokeWidth = "none",
GENEMouseOutDisplay = FALSE,
GENEMouseOutAnimationTime = 500,
GENEMouseOutColor = "red",
GENEMouseOutArcOpacity = 1,
GENEMouseOutArcStrokeColor = "none",
GENEMouseOutArcStrokeWidth = "none",
GENEMouseUpDisplay = FALSE,
GENEMouseUpColor = "red",
GENEMouseUpArcOpacity = 1,
GENEMouseUpArcStrokeColor = "none",
GENEMouseUpArcStrokeWidth = "none",
GENEMouseOverDisplay = FALSE,
GENEMouseOverColor = "red",
GENEMouseOverArcOpacity = 1,
GENEMouseOverArcStrokeColor = "none",
GENEMouseOverArcStrokeWidth = "none",
GENEMouseOverTooltipsSetting = "style1",
GENEMouseOverTooltipsHtml = " ",
GENEMouseOverTooltipsPosition = "absolute",
GENEMouseOverTooltipsBackgroundColor = "white",
GENEMouseOverTooltipsBorderStyle = "solid",
GENEMouseOverTooltipsBorderWidth = 0,
GENEMouseOverTooltipsPadding = "3px",
GENEMouseOverTooltipsBorderRadius = "3px",
GENEMouseOverTooltipsOpacity = 1,
LOLLIPOPxlink = FALSE,
LOLLIPOPMouseEvent = TRUE,
LOLLIPOPMouseClickedDisplay = FALSE,
LOLLIPOPMouseClickedColor = "red",
LOLLIPOPMouseClickedCircleSize = 2,
LOLLIPOPMouseClickedCircleOpacity = 1,
LOLLIPOPMouseClickedCircleStrokeColor = "none",
LOLLIPOPMouseClickedCircleStrokeWidth = "none",
LOLLIPOPMouseClickedTextFromData = "fourth",
LOLLIPOPMouseClickedTextOpacity = 1,
LOLLIPOPMouseClickedTextColor = "red",
LOLLIPOPMouseClickedTextSize = 8,
LOLLIPOPMouseClickedTextPostionX = 1,
LOLLIPOPMouseClickedTextPostionY = 10,
LOLLIPOPMouseClickedTextDrag = TRUE,
LOLLIPOPMouseDownDisplay = FALSE,
```

```
LOLLIPOPMouseDownColor = "red",
LOLLIPOPMouseDownCircleSize = 2,
LOLLIPOPMouseDownCircleOpacity = 1,
LOLLIPOPMouseDownCircleStrokeColor = "none",
LOLLIPOPMouseDownCircleStrokeWidth = "none",
LOLLIPOPMouseEnterDisplay = FALSE,
LOLLIPOPMouseEnterColor = "red",
LOLLIPOPMouseEnterCircleSize = 2,
LOLLIPOPMouseEnterCircleOpacity = 1,
LOLLIPOPMouseEnterCircleStrokeColor = "none",
LOLLIPOPMouseEnterCircleStrokeWidth = "none",
LOLLIPOPMouseLeaveDisplay = FALSE,
LOLLIPOPMouseLeaveColor = "red",
LOLLIPOPMouseLeaveCircleSize = 2,
LOLLIPOPMouseLeaveCircleOpacity = 1,
LOLLIPOPMouseLeaveCircleStrokeColor = "none",
LOLLIPOPMouseLeaveCircleStrokeWidth = "none",
LOLLIPOPMouseMoveDisplay = FALSE,
LOLLIPOPMouseMoveColor = "red",
LOLLIPOPMouseMoveCircleSize = 2,
LOLLIPOPMouseMoveCircleOpacity = 1,
LOLLIPOPMouseMoveCircleStrokeColor = "none",
LOLLIPOPMouseMoveCircleStrokeWidth = "none",
LOLLIPOPMouseOutDisplay = FALSE,
LOLLIPOPMouseOutAnimationTime = 500,
LOLLIPOPMouseOutColor = "red",
LOLLIPOPMouseOutCircleSize = 2,
LOLLIPOPMouseOutCircleOpacity = 1,
LOLLIPOPMouseOutCircleStrokeColor = "none",
LOLLIPOPMouseOutCircleStrokeWidth = "none",
LOLLIPOPMouseUpDisplay = FALSE,
LOLLIPOPMouseUpColor = "red",
LOLLIPOPMouseUpCircleSize = 2,
LOLLIPOPMouseUpCircleOpacity = 1,
LOLLIPOPMouseUpCircleStrokeColor = "none",
LOLLIPOPMouseUpCircleStrokeWidth = "none",
LOLLIPOPMouseOverDisplay = FALSE,
LOLLIPOPMouseOverColor = "red",
LOLLIPOPMouseOverCircleSize = 2,
LOLLIPOPMouseOverCircleOpacity = 1,
LOLLIPOPMouseOverCircleStrokeColor = "none",
LOLLIPOPMouseOverCircleStrokeWidth = "none",
LOLLIPOPMouseOverTooltipsSetting = "style1",
LOLLIPOPMouseOverTooltipsHtml = " ",
LOLLIPOPMouseOverTooltipsPosition = "absolute",
LOLLIPOPMouseOverTooltipsBackgroundColor = "white",
LOLLIPOPMouseOverTooltipsBorderStyle = "solid",
LOLLIPOPMouseOverTooltipsBorderWidth = 0,
```

```

LOLLIPOPMouseOverTooltipsPadding = "3px",
LOLLIPOPMouseOverTooltipsBorderRadius = "3px",
LOLLIPOPMouseOverTooltipsOpacity = 1,
elementId = NULL,
...
)

```

## Arguments

|                                                                                                                      |                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| moduleList                                                                                                           | Module list displayed in plot                                                                                                                             |
| genome                                                                                                               | Could be either 'hg19', which is defaultly set to use chromosomes of hg19, or a list of chromosomes with length, for example, list("chr1"=100,"chr2"=200) |
| genome2                                                                                                              | Second genome when compare module is applied, format is same as genome                                                                                    |
| genomeFillColor                                                                                                      | Could be either a color palette from RColorBrewer, or a list of color name, for example, list("yellow","rgb(1,255,255)")                                  |
| chrPad                                                                                                               | Distance between each chromosome, default is 0.04                                                                                                         |
| width, height                                                                                                        | The width and height for svg element, could be px or percent or auto                                                                                      |
| innerRadius                                                                                                          | Default 216, Inner radius of chromosome                                                                                                                   |
| outerRadius                                                                                                          | Default 240, Outer radius of chromosome                                                                                                                   |
| svgClassName                                                                                                         | The svg class name                                                                                                                                        |
| displayGenomeBorder                                                                                                  | Whether display a border for genome track or not                                                                                                          |
| genomeBorderColor, genomeBorderSize                                                                                  | The color and size for border of genome                                                                                                                   |
| genomeTicksDisplay                                                                                                   | Whether display the ticks for genome track                                                                                                                |
| genomeTicksLen, genomeTicksColor, genomeTicksTextSize, genomeTicksTextColor, genomeTicksScale, genomeTicksFontWeight | Parameters only works when genomeTicksDisplay is TRUE and their details are available on document                                                         |
| genomeLabelDisplay, genomeLabelTextSize, genomeLabelTextColor, genomeLabelDx, genomeLabelDy                          | Whether display the label for chromosome panel. Other parameters only works when genomeTicksDisplay is TRUE and their details are available on document   |
| compareEvent                                                                                                         | Default False, open/not COMPARE module                                                                                                                    |
| compareEventGroupGapRate                                                                                             | Default 0.1, control the two-side gap rate on each group of genome                                                                                        |
| compareEventGroupDistance                                                                                            | Default 0, distance between two groups of genome                                                                                                          |
| zoom                                                                                                                 | Whether or not the plot is zoomable?                                                                                                                      |
| TEXTModuleDragEvent                                                                                                  | Are text annotations draggable?                                                                                                                           |
| CNVxlink                                                                                                             | Default False, add/not xlink for CNV module                                                                                                               |
| CNVMouseEvent                                                                                                        | Default True, open/not open mouse event of CNV module                                                                                                     |

CNVMouseClickedDisplay  
Default False, show/not the tooltip when mouse click on a CNV point

CNVMouseClickedColor  
Color when mouse clicking

CNVMouseClickedArcOpacity  
Arc opacity when mouse clicking the element

CNVMouseClickedArcStrokeColor  
Arc stroke color when mouse clicking the element

CNVMouseClickedArcStrokeWidth  
Arc stroke width when mouse clicking the element

CNVMouseClickedTextFromData  
Text column when mouse clicking the element

CNVMouseClickedTextOpacity  
Text opacity when mouse clicking the element

CNVMouseClickedTextColor  
Text color when mouse clicking the element

CNVMouseClickedTextSize  
Text size when mouse clicking the element

CNVMouseClickedTextPostionX, CNVMouseClickedTextPostionY  
Text coordinates when mouse clicking the element

CNVMouseClickedTextDrag  
Whether text is draggable when mouse clicking the element

CNVMouseDownDisplay  
Default False, show/not the tooltip when mouse click down a CNV point

CNVMouseDownColor  
Color when mouse moving down the element

CNVMouseDownArcOpacity  
Arc opacity when mouse moving down the element

CNVMouseDownArcStrokeColor  
Arc stroke color when mouse moving down the element

CNVMouseDownArcStrokeWidth  
Arc stroke width when mouse moving down the element

CNVMouseEnterDisplay  
Default False, show/not the tooltip when mouse mover over a CNV point

CNVMouseEnterColor  
Color when mouse entering the element

CNVMouseEnterArcOpacity  
Arc opacity when mouse entering the element

CNVMouseEnterArcStrokeColor  
Arc stroke color when mouse entering the element

CNVMouseEnterArcStrokeWidth  
Arc stroke width when mouse entering the element

CNVMouseLeaveDisplay  
Default False, show/not the tooltip when mouse mover leave a CNV point

CNVMouseLeaveColor  
Color when mouse leaving the element

CNVMouseLeaveArcOpacity  
Arc opacity when mouse leaving the element

CNVMouseLeaveArcStrokeColor  
Arc stroke color when mouse leaving the element

CNVMouseLeaveArcStrokeWidth  
Arc stroke width when mouse leaving the element

CNVMouseMoveDisplay  
Default False, show/not the tooltip when mouse move into a CNV point

CNVMouseMoveColor  
Color when mouse moving in the element

CNVMouseMoveArcOpacity  
Arc opacity when mouse moving in the element

CNVMouseMoveArcStrokeColor  
Arc stroke color when mouse moving in the element

CNVMouseMoveArcStrokeWidth  
Arc stroke width when mouse moving in the element

CNVMouseOutDisplay  
Default False, hide/not tooltip when mouse is not hovering a CNV point anymore

CNVMouseOutAnimationTime  
Animation time when mouse moving out the element

CNVMouseOutColor  
Color when mouse moving out the element

CNVMouseOutArcOpacity  
Arc opacity when mouse moving out the element

CNVMouseOutArcStrokeColor  
Arc stroke color when mouse moving out the element

CNVMouseOutArcStrokeWidth  
Arc stroke width when mouse moving out the element

CNVMouseUpDisplay  
Default False, show/not the tooltip when mouse click up a CNV point

CNVMouseUpColor  
Color when mouse moving up the element

CNVMouseUpArcOpacity  
Arc opacity when mouse clicking the element

CNVMouseUpArcStrokeColor  
Arc stroke color when mouse clicking the element

CNVMouseUpArcStrokeWidth  
Arc stroke width when mouse clicking the element

CNVMouseOverDisplay  
Default False, show/not the tooltip when mouse hover on a CNV point

CNVMouseOverColor  
Color when mouse moving over the element



|                                     |                                                                           |
|-------------------------------------|---------------------------------------------------------------------------|
| CNVMouseOverArcOpacity              | Arc opacity when mouse moving over the element                            |
| CNVMouseOverArcStrokeColor          | Arc stroke color when mouse moving over the element                       |
| CNVMouseOverArcStrokeWidth          | Arc stroke width when mouse moving over the element                       |
| CNVMouseOverTooltipsSetting         | Default "style1"                                                          |
| CNVMouseOverTooltipsHtml            | Default " "                                                               |
| CNVMouseOverTooltipsPosition        | Default "absolute"                                                        |
| CNVMouseOverTooltipsBackgroundColor | Default "white"                                                           |
| CNVMouseOverTooltipsBorderStyle     | Default "solid"                                                           |
| CNVMouseOverTooltipsBorderWidth     | Default 0                                                                 |
| CNVMouseOverTooltipsPadding         | Default "3px"                                                             |
| CNVMouseOverTooltipsBorderRadius    | Default "3px"                                                             |
| CNVMouseOverTooltipsOpacity         | Default 0.8                                                               |
| HEATMAPMouseEvent                   | Default True, open/not open mouse event of HEATMAP module                 |
| HEATMAPMouseClickedDisplay          | Default False, show/not the tooltip when mouse click on a HEATMAP point   |
| HEATMAPMouseClickedColor            | Color when mouse clicking                                                 |
| HEATMAPMouseClickedOpacity          | Opacity when mouse clicking                                               |
| HEATMAPMouseClickedStrokeColor      | Stroke color when mouse clicking                                          |
| HEATMAPMouseClickedStrokeWidth      | Stroke width when mouse clicking                                          |
| HEATMAPMouseDownDisplay             | Default False, show/not the tooltip when mouse click down a HEATMAP point |
| HEATMAPMouseDownColor               | Color when mouse moving down the element                                  |
| HEATMAPMouseDownOpacity             | Opacity when mouse moving down the element                                |
| HEATMAPMouseDownStrokeColor         | Stroke color when mouse moving down the element                           |
| HEATMAPMouseDownStrokeWidth         | Stroke width when mouse moving down the element                           |

HEATMAPMouseEnterDisplay  
Default False, show/not the tooltip when mouse mover over a HEATMAP point

HEATMAPMouseEnterColor  
Color when mouse entering the element

HEATMAPMouseEnterOpacity  
Opacity when mouse entering the element

HEATMAPMouseEnterStrokeColor  
Stroke color when mouse entering the element

HEATMAPMouseEnterStrokeWidth  
Stroke width when mouse entering the element

HEATMAPMouseLeaveDisplay  
Default False, show/not the tooltip when mouse mover leave a HEATMAP point

HEATMAPMouseLeaveColor  
Color when mouse leaving the element

HEATMAPMouseLeaveOpacity  
Opacity when mouse leaving the element

HEATMAPMouseLeaveStrokeColor  
Stroke color when mouse leaving the element

HEATMAPMouseLeaveStrokeWidth  
Stroke width when mouse leaving the element

HEATMAPMouseMoveDisplay  
Default False, show/not the tooltip when mouse move into a HEATMAP point

HEATMAPMouseMoveColor  
Color when mouse moving in the element

HEATMAPMouseMoveOpacity  
Opacity when mouse moving in the element

HEATMAPMouseMoveStrokeColor  
Stroke color when mouse moving in the element

HEATMAPMouseMoveStrokeWidth  
Stroke width when mouse moving in the element

HEATMAPMouseOutDisplay  
Defalut False, hide/not tooltip when mouse is not hovering a HEATMAP point anymore

HEATMAPMouseOutAnimationTime  
Animation time when mouse moving out the element

HEATMAPMouseOutColor  
Color when mouse moving out the element

HEATMAPMouseOutOpacity  
Opacity when mouse moving out the element

HEATMAPMouseOutStrokeColor  
Stroke color when mouse moving out the element

HEATMAPMouseOutStrokeWidth  
Stroke width when mouse moving out the element

HEATMAPMouseUpDisplay  
Default False, show/not the tooltip when mouse click up a HEATMAP point

HEATMAPMouseUpColor  
Color when mouse moving up the element

HEATMAPMouseUpOpacity  
Opacity when mouse moving up the element

HEATMAPMouseUpStrokeColor  
Stroke color when mouse moving up the element

HEATMAPMouseUpStrokeWidth  
Stroke width when mouse moving up the element

HEATMAPMouseOverDisplay  
Default False, show/not the tooltip when mouse hover on a HEATMAP point

HEATMAPMouseOverColor  
Color when mouse moving over the element

HEATMAPMouseOverOpacity  
Opacity when mouse moving over the element

HEATMAPMouseOverStrokeColor  
Stroke color when mouse moving over the element

HEATMAPMouseOverStrokeWidth  
Stroke width when mouse moving over the element

HEATMAPMouseOverTooltipsSetting  
Default "style1"

HEATMAPMouseOverTooltipsHtml  
Default " "

HEATMAPMouseOverTooltipsPosition  
Default "absolute"

HEATMAPMouseOverTooltipsBackgroundColor  
Default "white"

HEATMAPMouseOverTooltipsBorderStyle  
Default "solid"

HEATMAPMouseOverTooltipsBorderWidth  
Default 0

HEATMAPMouseOverTooltipsPadding  
Default "3px"

HEATMAPMouseOverTooltipsBorderRadius  
Default "3px"

HEATMAPMouseOverTooltipsOpacity  
Default 0.8

BUBBLExlink Default False, add/not xlink for BUBBLE module

BUBBLEMouseEvent  
Default True, open/not open mouse event of BUBBLE module

BUBBLEMouseClickedDisplay  
Default False, show/not the tooltip when mouse click on a BUBBLE point

BUBBLEMouseClickedColor  
Color when mouse clicking

BUBBLEMouseClickedOpacity  
Opacity when mouse clicking

BUBBLEMouseClickStrokeColor  
Stroke color when mouse clicking

BUBBLEMouseClickStrokeWidth  
Stroke width when mouse clicking

BUBBLEMouseDownDisplay  
Default False, show/not the tooltip when mouse click down a BUBBLE point

BUBBLEMouseDownColor  
Color when mouse moving down the element

BUBBLEMouseDownOpacity  
Opacity when mouse moving down the element

BUBBLEMouseDownStrokeColor  
Stroke color when mouse moving down the element

BUBBLEMouseDownStrokeWidth  
Stroke width when mouse moving down the element

BUBBLEMouseEnterDisplay  
Default False, show/not the tooltip when mouse mover over a BUBBLE point

BUBBLEMouseEnterColor  
Color when mouse entering the element

BUBBLEMouseEnterOpacity  
Opacity when mouse entering the element

BUBBLEMouseEnterStrokeColor  
Stroke color when mouse entering the element

BUBBLEMouseEnterStrokeWidth  
Stroke width when mouse entering the element

BUBBLEMouseLeaveDisplay  
Default False, show/not the tooltip when mouse mover leave a BUBBLE point

BUBBLEMouseLeaveColor  
Color when mouse leaving the element

BUBBLEMouseLeaveOpacity  
Opacity when mouse leaving the element

BUBBLEMouseLeaveStrokeColor  
Stroke color when mouse leaving the element

BUBBLEMouseLeaveStrokeWidth  
Stroke width when mouse leaving the element

BUBBLEMouseMoveDisplay  
Default False, show/not the tooltip when mouse move into a BUBBLE point

BUBBLEMouseMoveColor  
Color when mouse moving in the element

BUBBLEMouseMoveOpacity  
Opacity when mouse moving in the element

BUBBLEMouseMoveStrokeColor  
Stroke color when mouse moving in the element

BUBBLEMouseMoveStrokeWidth  
Stroke width when mouse moving in the element

BUBBLEMouseOutDisplay  
Default False, hide/not tooltip when mouse is not hovering a BUBBLE point anymore

BUBBLEMouseOutAnimationTime  
Animation time when mouse moving out the element

BUBBLEMouseOutColor  
Color when mouse moving out the element

BUBBLEMouseOutOpacity  
Opacity when mouse moving out the element

BUBBLEMouseOutStrokeColor  
Stroke color when mouse moving out the element

BUBBLEMouseOutStrokeWidth  
Stroke width when mouse moving out the element

BUBBLEMouseUpDisplay  
Default False, show/not the tooltip when mouse click up a BUBBLE point

BUBBLEMouseUpColor  
Color when mouse moving up the element

BUBBLEMouseUpOpacity  
Opacity when mouse moving up the element

BUBBLEMouseUpStrokeColor  
Stroke color when mouse moving up the element

BUBBLEMouseUpStrokeWidth  
Stroke width when mouse moving up the element

BUBBLEMouseOverDisplay  
Default False, show/not the tooltip when mouse hover on a BUBBLE point

BUBBLEMouseOverColor  
Color when mouse moving over the element

BUBBLEMouseOverOpacity  
Opacity when mouse moving over the element

BUBBLEMouseOverStrokeColor  
Stroke color when mouse moving over the element

BUBBLEMouseOverStrokeWidth  
Stroke width when mouse moving over the element

BUBBLEMouseOverTooltipsSetting  
Default "style1"

BUBBLEMouseOverTooltipsHtml  
Default " "

BUBBLEMouseOverTooltipsPosition  
Default "absolute"

BUBBLEMouseOverTooltipsBackgroundColor  
Default "white"

BUBBLEMouseOverTooltipsBorderStyle  
Default "solid"

BUBBLEMouseOverTooltipsBorderWidth  
Default 0

BUBBLEMouseOverTooltipsPadding  
     Default "3px"  
 BUBBLEMouseOverTooltipsBorderRadius  
     Default "3px"  
 BUBBLEMouseOverTooltipsOpacity  
     Default 0.8  
 SNPxlink      Default False, add/not xlink for SNP module  
 SNPMouseEvent   Default True, open/not open mouse event of SNP module  
 SNPMouseCombinationEvent  
     Default False, open/not COMBINATION module for SNP module  
 SNPMouseCombinationImageDisplay  
     Default False, open/not image display in COMBINATION module for SNP  
     module  
 SNPMouseCombinationImageTitle  
     Title of the image  
 SNPMouseCombinationImageTitleSize, SNPMouseCombinationImageTitleWeight, SNPMouseCombinationImageTitleColor  
     Size, weight and color of the title  
 SNPMouseCombinationImagePositionX, SNPMouseCombinationImagePositionY  
     Coordinates for image  
 SNPMouseCombinationImageHeight, SNPMouseCombinationImageWidth  
     Height and width of image  
 SNPMouseCombinationGraphDisplay  
     Default False, open/not graph display in COMBINATION module for SNP module  
 SNPMouseCombinationGraphTitle  
     Title of the graph  
 SNPMouseCombinationGraphTitleSize, SNPMouseCombinationGraphTitleWeight, SNPMouseCombinationGraphTitleColor  
     Size, weight and color of the title  
 SNPMouseCombinationGraphType  
     Type of graph  
 SNPMouseCombinationGraphPositionX, SNPMouseCombinationGraphPositionY  
     Coordinates for graph  
 SNPMouseCombinationGraphHeight, SNPMouseCombinationGraphWidth  
     Height and width for graph  
 SNPMouseCombinationGraphHistogramBarColor  
     Bar color of histogram graph  
 SNPMouseCombinationGraphHistogramPadding  
     Padding between bar of histogram graph  
 SNPMouseCombinationGraphHistogramPositionCorrectX  
     Correction distance of X axis in histogram  
 SNPMouseCombinationGraphPieAutoColor  
     Whether use auto color for pie graph or not  
 SNPMouseCombinationGraphPieColor  
     Color for pie graph if auto color is false

SNPMouseCombinationGraphPieSize  
Size of pie graph

SNPMouseCombinationGraphPieStroke  
Whether each pie has a stroke or not

SNPMouseCombinationGraphPieStrokeColor, SNPMouseCombinationGraphPieStrokeWidth  
The stroke color and width for pie graph

SNPMouseCombinationGraphPieOpacity  
Opacity for pie graph

SNPMouseCombinationGraphLineType, SNPMouseCombinationGraphLineColor, SNPMouseCombinationGraphLineWidth  
Line type, color and width for line graph

SNPMouseCombinationGraphLinePoint  
Whether display the broken point in line graph

SNPMouseCombinationGraphLinePointSize  
Size of broken point

SNPMouseCombinationGraphLinePointAutoColor  
Whether display the broken point in auto color

SNPMouseCombinationGraphLinePointColor  
Color for broken point if auto color is false

SNPMouseCombinationGraphLinePointStroke  
Whether display the broken point stroke

SNPMouseCombinationGraphLinePointStrokeColor, SNPMouseCombinationGraphLinePointStrokeWidth  
The stroke color and width for broken point

SNPMouseCombinationGraphLinePointOpacity  
Opacity for broken line

SNPMouseCombinationGraphLinePositionCorrectX  
Correction distance of X axis for line

SNPMouseCombinationTextDisplay  
Default False, open/not text display in COMBINATION module for SNP module

SNPMouseCombinationTextColor, SNPMouseCombinationTextSize, SNPMouseCombinationTextWeight  
The color, size and weight for text

SNPMouseCombinationTextPositionCorrectX, SNPMouseCombinationTextPositionCorrectY  
The coordinates for text

SNPMouseClickDisplay  
Default False, show/not the tooltip when mouse click on a SNP point

SNPMouseClickColor  
Color after clicking the element

SNPMouseClickCircleSize  
Circle size after clicking the element

SNPMouseClickCircleOpacity  
Opacity after clicking the element

SNPMouseClickCircleStrokeColor  
Stroke color after clicking the element

SNPMouseClickCircleStrokeWidth  
Stroke width after clicking the element

SNPMouseClickTextFromData  
First,second,third,fourth column data click to show

SNPMouseClickTextOpacity  
Text opacity after clicking the element

SNPMouseClickTextColor  
Text color after clicking the element

SNPMouseClickTextSize  
Text size after clicking the element

SNPMouseClickTextPostionX, SNPMouseClickTextPostionY  
Text coordinate after clicking the element

SNPMouseClickTextDrag  
Whether text is draggable for element

SNPMouseDownDisplay  
Default False, show/not the tooltip when mouse click down a SNP point

SNPMouseDownColor  
Color after mouse moving down the element

SNPMouseDownCircleSize  
Circle size after mouse moving down the element

SNPMouseDownCircleOpacity  
Circle opacity after mouse moving down the element

SNPMouseDownCircleStrokeColor  
Circle stroke color after mouse moving down the element

SNPMouseDownCircleStrokeWidth  
Circle stroke width after mouse moving down the element

SNPMouseEnterDisplay  
Default False, show/not the tooltip when mouse mover over a SNP point

SNPMouseEnterColor  
Color after mouse entering enter the element

SNPMouseEnterCircleSize  
Circle size after mouse entering the element

SNPMouseEnterCircleOpacity  
Circle opacity after mouse entering the element

SNPMouseEnterCircleStrokeColor  
Circle stroke color after mouse entering the element

SNPMouseEnterCircleStrokeWidth  
Circle stroke width after mouse entering the element

SNPMouseLeaveDisplay  
Default False, show/not the tooltip when mouse mover leave a SNP point

SNPMouseLeaveColor  
Color after mouse leaving the element

SNPMouseLeaveCircleSize  
Circle size after mouse leaving the element

SNPMouseLeaveCircleOpacity  
Circle opacity after mouse leaving the element



|                                |                                                                                |
|--------------------------------|--------------------------------------------------------------------------------|
| SNPMouseLeaveCircleStrokeColor | Circle stroke color after mouse leaving the element                            |
| SNPMouseLeaveCircleStrokeWidth | Circle stroke width after mouse leaving the element                            |
| SNPMouseMoveDisplay            | Default False, show/not the tooltip when mouse move into a SNP point           |
| SNPMouseMoveColor              | Color after mouse moving in the element                                        |
| SNPMouseMoveCircleSize         | Circle size after mouse moving in the element                                  |
| SNPMouseMoveCircleOpacity      | Circle opacity after mouse moving in the element                               |
| SNPMouseMoveCircleStrokeColor  | Circle stroke color after mouse moving in the element                          |
| SNPMouseMoveCircleStrokeWidth  | Circle stroke width after mouse moving in the element                          |
| SNPMouseOutDisplay             | Default False, hide/not tooltip when mouse is not hovering a SNP point anymore |
| SNPMouseOutAnimationTime       | Animation time when mouse moving over the element                              |
| SNPMouseOutColor               | Color when mouse moving over the element                                       |
| SNPMouseOutCircleSize          | Circle size when mouse moving over the element                                 |
| SNPMouseOutCircleOpacity       | Opacity when mouse moving over the element                                     |
| SNPMouseOutCircleStrokeColor   | Stroke color when mouse moving over the element                                |
| SNPMouseOutCircleStrokeWidth   | Stroke width when mouse moving over the element                                |
| SNPMouseUpDisplay              | Default False, show/not the tooltip when mouse click up a SNP point            |
| SNPMouseUpColor                | Color after mouse moving up the element                                        |
| SNPMouseUpCircleSize           | Circle size after mouse moving up the element                                  |
| SNPMouseUpCircleOpacity        | Circle opacity after mouse moving up the element                               |
| SNPMouseUpCircleStrokeColor    | Circle stroke color after mouse moving up the element                          |
| SNPMouseUpCircleStrokeWidth    | Circle stroke width after mouse moving up the element                          |
| SNPMouseOverDisplay            | Default False, show/not the tooltip when mouse hover on a SNP point            |

|                                     |                                                                        |
|-------------------------------------|------------------------------------------------------------------------|
| SNPMouseOverColor                   | Color after mouse moving over the element                              |
| SNPMouseOverCircleSize              | Circle size after mouse moving over the element                        |
| SNPMouseOverCircleOpacity           | Circle opacity after mouse moving over the element                     |
| SNPMouseOverCircleStrokeColor       | Circle stroke color after mouse moving over the element                |
| SNPMouseOverCircleStrokeWidth       | Circle stroke width after mouse moving over the element                |
| SNPMouseOverTooltipsSetting         | Default "chr : "                                                       |
| SNPMouseOverTooltipsHtml            | Default " "                                                            |
| SNPMouseOverTooltipsPosition        | Position for tooltips when mouse moving over                           |
| SNPMouseOverTooltipsBackgroundColor | Background color for tooltips when mouse moving over                   |
| SNPMouseOverTooltipsBorderStyle     | Border style for tooltips when mouse moving over                       |
| SNPMouseOverTooltipsBorderWidth     | Border width for tooltips when mouse moving over                       |
| SNPMouseOverTooltipsPadding         | Padding for tooltips when mouse moving over                            |
| SNPMouseOverTooltipsBorderRadius    | Border radius for tooltips when mouse moving over                      |
| SNPMouseOverTooltipsOpacity         | Opacity for tooltips when mouse moving over                            |
| LINKxlink                           | Default False, add/not xlink for LINK module                           |
| LINKMouseEvent                      | Default True, open/not open mouse event of LINK module                 |
| LINKMouseClickedDisplay             | Default False, show/not the tooltip when mouse click on a LINK point   |
| LINKMouseClickedOpacity             | Opacity when mouse clicking                                            |
| LINKMouseClickedStrokeColor         | Stroke color when mouse clicking                                       |
| LINKMouseClickedStrokeWidth         | Stroke width when mouse clicking                                       |
| LINKMouseDownDisplay                | Default False, show/not the tooltip when mouse click down a LINK point |
| LINKMouseDownOpacity                | Opacity when mouse moving down the element                             |
| LINKMouseDownStrokeColor            | Stroke color when mouse moving down the element                        |

|                           |                                                                                      |
|---------------------------|--------------------------------------------------------------------------------------|
| LINKMouseDownStrokeWidth  | Stroke width when mouse moving down the element                                      |
| LINKMouseEnterDisplay     | Default False, show/not the tooltip when mouse mover over a LINK point               |
| LINKMouseEnterOpacity     | Opacity when mouse entering the element                                              |
| LINKMouseEnterStrokeColor | Stroke color when mouse entering the element                                         |
| LINKMouseEnterStrokeWidth | Stroke width when mouse entering the element                                         |
| LINKMouseLeaveDisplay     | Default False, show/not the tooltip when mouse mover leave a LINK point              |
| LINKMouseLeaveOpacity     | Opacity when mouse leaving the element                                               |
| LINKMouseLeaveStrokeColor | Stroke color when mouse leaving the element                                          |
| LINKMouseLeaveStrokeWidth | Stroke width when mouse leaving the element                                          |
| LINKMouseMoveDisplay      | Default False, show/not the tooltip when mouse move into a LINK point                |
| LINKMouseMoveOpacity      | Opacity when mouse moving in the element                                             |
| LINKMouseMoveStrokeColor  | Stroke color when mouse moving in the element                                        |
| LINKMouseMoveStrokeWidth  | Stroke width when mouse moving in the element                                        |
| LINKMouseOutDisplay       | Defalut False, hide/not tooltip when mouse is not hovering a LINK point any-<br>more |
| LINKMouseOutAnimationTime | Animation time when mouse moving out the element                                     |
| LINKMouseOutOpacity       | Opacity when mouse moving out the element                                            |
| LINKMouseOutStrokeColor   | Stroke color when mouse moving out the element                                       |
| LINKMouseOutStrokeWidth   | Stroke width when mouse moving out the element                                       |
| LINKMouseUpDisplay        | Default False, show/not the tooltip when mouse click up a LINK point                 |
| LINKMouseUpOpacity        | Opacity when mouse moving up the element                                             |
| LINKMouseUpStrokeColor    | Stroke color when mouse moving up the element                                        |
| LINKMouseUpStrokeWidth    | Stroke width when mouse moving up the element                                        |

LINKMouseOverDisplay  
     Default False, show/not the tooltip when mouse hover on a LINK point  
 LINKMouseOverOpacity  
     Opacity when mouse moving over the element  
 LINKMouseOverStrokeColor  
     Stroke color when mouse moving over the element  
 LINKMouseOverStrokeWidth  
     Stroke width when mouse moving over the element  
 LINKMouseOverTooltipsSetting  
     Default "style1"  
 LINKMouseOverTooltipsHtml  
     Default " "  
 LINKMouseOverTooltipsPosition  
     Default "absolute"  
 LINKMouseOverTooltipsBackgroundColor  
     Default "white"  
 LINKMouseOverTooltipsBorderStyle  
     Default "solid"  
 LINKMouseOverTooltipsBorderWidth  
     Default 0  
 LINKMouseOverTooltipsPadding  
     Default "3px"  
 LINKMouseOverTooltipsBorderRadius  
     Default "3px"  
 LINKMouseOverTooltipsOpacity  
     Default 0.8  
 LINKLabelDragEvent  
     Default False, draggable for the label of LINK module  
 CHORDMouseEvent  
     Default True, open/not open mouse event of CHORD module from NG-Circos  
 CHORDMouseFillColorExcluded  
     A type of color in character, chord in this color will be hided  
 CHORDMouseClickedDisplay  
     Default False, show/not the tooltip when mouse click on a CHORD point  
 CHORDMouseClickedOpacity  
     Opacity when mouse clicking  
 CHORDMouseClickedStrokeColor  
     Stroke color when mouse clicking  
 CHORDMouseClickedStrokeWidth  
     Stroke width when mouse clicking  
 CHORDMouseDownDisplay  
     Default False, show/not the tooltip when mouse click down a CHORD point  
 CHORDMouseDownOpacity  
     Opacity when mouse moving down the element  
 CHORDMouseDownStrokeColor  
     Stroke color when mouse moving down the element

|                            |                                                                                  |
|----------------------------|----------------------------------------------------------------------------------|
| CHORDMouseDownStrokeWidth  | Stroke width when mouse moving down the element                                  |
| CHORDMouseEnterDisplay     | Default False, show/not the tooltip when mouse mover over a CHORD point          |
| CHORDMouseEnterOpacity     | Opacity when mouse entering the element                                          |
| CHORDMouseEnterStrokeColor | Stroke color when mouse entering the element                                     |
| CHORDMouseEnterStrokeWidth | Stroke width when mouse entering the element                                     |
| CHORDMouseLeaveDisplay     | Default False, show/not the tooltip when mouse mover leave a CHORD point         |
| CHORDMouseLeaveOpacity     | Opacity when mouse leaving the element                                           |
| CHORDMouseLeaveStrokeColor | Stroke color when mouse leaving the element                                      |
| CHORDMouseLeaveStrokeWidth | Stroke width when mouse leaving the element                                      |
| CHORDMouseMoveDisplay      | Default False, show/not the tooltip when mouse move into a CHORD point           |
| CHORDMouseMoveOpacity      | Opacity when mouse moving in the element                                         |
| CHORDMouseMoveStrokeColor  | Stroke color when mouse moving in the element                                    |
| CHORDMouseMoveStrokeWidth  | Stroke width when mouse moving in the element                                    |
| CHORDMouseOutDisplay       | Defalut False, hide/not tooltip when mouse is not hovering a CHORD point anymore |
| CHORDMouseOutAnimationTime | Animation time when mouse moving out the element                                 |
| CHORDMouseOutOpacity       | Opacity when mouse moving out the element                                        |
| CHORDMouseOutStrokeColor   | Stroke color when mouse moving out the element                                   |
| CHORDMouseOutStrokeWidth   | Stroke width when mouse moving out the element                                   |
| CHORDMouseUpDisplay        | Default False, show/not the tooltip when mouse click up a CHORD point            |
| CHORDMouseUpOpacity        | Opacity when mouse moving up the element                                         |
| CHORDMouseUpStrokeColor    | Stroke color when mouse moving up the element                                    |
| CHORDMouseUpStrokeWidth    | Stroke width when mouse moving up the element                                    |

CHORDMouseOverDisplay  
Default False, show/not the tooltip when mouse hover on a CHORD point

CHORDMouseOverOpacity  
Opacity when mouse moving over the element

CHORDMouseOverStrokeColor  
Stroke color when mouse moving over the element

CHORDMouseOverStrokeWidth  
Stroke width when mouse moving over the element

HISTOGRAMxlink Default False, add/not xlink for HISTOGRAM module

HISTOGRAMMouseEvent  
Default True, open/not open mouse event of HISTOGRAM module

HISTOGRAMMouseClickedDisplay  
Default False, show/not the tooltip when mouse click on a HISTOGRAM point

HISTOGRAMMouseClickedColor  
Color when mouse clicking

HISTOGRAMMouseClickedOpacity  
Opacity when mouse clicking

HISTOGRAMMouseClickedStrokeColor  
Stroke color when mouse clicking

HISTOGRAMMouseClickedStrokeWidth  
Stroke width when mouse clicking

HISTOGRAMMouseDownDisplay  
Default False, show/not the tooltip when mouse click down a HISTOGRAM point

HISTOGRAMMouseDownColor  
Color when mouse moving down the element

HISTOGRAMMouseDownOpacity  
Opacity when mouse moving up the element

HISTOGRAMMouseDownStrokeColor  
Stroke color when mouse moving up the element

HISTOGRAMMouseDownStrokeWidth  
Stroke width when mouse moving up the element

HISTOGRAMMouseEnterDisplay  
Default False, show/not the tooltip when mouse mover over a HISTOGRAM point

HISTOGRAMMouseEnterColor  
Color when mouse entering the element

HISTOGRAMMouseEnterOpacity  
Opacity when mouse entering the element

HISTOGRAMMouseEnterStrokeColor  
Stroke color when mouse entering the element

HISTOGRAMMouseEnterStrokeWidth  
Stroke width when mouse entering the element

HISTOGRAMMouseLeaveDisplay  
Default False, show/not the tooltip when mouse mover leave a HISTOGRAM point

HISTOGRAMMouseLeaveColor  
Color when mouse leaving the element

HISTOGRAMMouseLeaveOpacity  
Opacity when mouse leaving the element

HISTOGRAMMouseLeaveStrokeColor  
Stroke color when mouse leaving the element

HISTOGRAMMouseLeaveStrokeWidth  
Stroke width when mouse leaving the element

HISTOGRAMMouseMoveDisplay  
Default False, show/not the tooltip when mouse move into a HISTOGRAM point

HISTOGRAMMouseMoveColor  
Color when mouse moving in the element

HISTOGRAMMouseMoveOpacity  
Opacity when mouse moving in the element

HISTOGRAMMouseMoveStrokeColor  
Stroke color when mouse moving in the element

HISTOGRAMMouseMoveStrokeWidth  
Stroke width when mouse moving in the element

HISTOGRAMMouseOutDisplay  
Defalut False, hide/not tooltip when mouse is not hovering a HISTOGRAM point anymore

HISTOGRAMMouseOutAnimationTime  
Animation time when mouse moving out the element

HISTOGRAMMouseOutColor  
Color when mouse moving out the element

HISTOGRAMMouseOutOpacity  
Opacity when mouse moving out the element

HISTOGRAMMouseOutStrokeColor  
Stroke color when mouse moving out the element

HISTOGRAMMouseOutStrokeWidth  
Stroke width when mouse moving out the element

HISTOGRAMMouseUpDisplay  
Default False, show/not the tooltip when mouse click up a HISTOGRAM point

HISTOGRAMMouseUpColor  
Color when mouse moving up the element

HISTOGRAMMouseUpOpacity  
Opacity when mouse moving up the element

HISTOGRAMMouseUpStrokeColor  
Stroke color when mouse moving up the element

HISTOGRAMMouseUpStrokeWidth  
Stroke width when mouse moving up the element

HISTOGRAMMouseOverDisplay  
 Default False, show/not the tooltip when mouse hover on a HISTOGRAM point

HISTOGRAMMouseOverColor  
 Color when mouse moving over the element

HISTOGRAMMouseOverOpacity  
 Opacity when mouse moving over the element

HISTOGRAMMouseOverStrokeColor  
 Stroke color when mouse moving over the element

HISTOGRAMMouseOverStrokeWidth  
 Stroke width when mouse moving over the element

HISTOGRAMMouseOverTooltipsSetting  
 Default "style1"

HISTOGRAMMouseOverTooltipsHtml  
 Default " "

HISTOGRAMMouseOverTooltipsPosition  
 Default "absolute"

HISTOGRAMMouseOverTooltipsBackgroundColor  
 Default "white"

HISTOGRAMMouseOverTooltipsBorderStyle  
 Default "solid"

HISTOGRAMMouseOverTooltipsBorderWidth  
 Default 0

HISTOGRAMMouseOverTooltipsPadding  
 Default "3px"

HISTOGRAMMouseOverTooltipsBorderRadius  
 Default "3px"

HISTOGRAMMouseOverTooltipsOpacity  
 Default 0.8

LINEMouseEvent Default True, open/not open mouse event of LINE module

LINEMouseClickedDisplay  
 Default False, show/not the tooltip when mouse click on a LINE point

LINEMouseClickedLineOpacity  
 Line opacity when mouse clicking the element

LINEMouseClickedLineStrokeColor  
 Stroke color when mouse clicking the element

LINEMouseClickedLineStrokeWidth  
 Stroke width when mouse clicking the element

LINEMouseDownDisplay  
 Default False, show/not the tooltip when mouse click down a LINE point

LINEMouseDownLineOpacity  
 Line opacity when mouse moving down the element

LINEMouseDownLineStrokeColor  
 Stroke color when mouse moving down the element

LINEMouseDownLineStrokeWidth  
 Stroke width when mouse moving down the element



LINEMouseEnterDisplay  
Default False, show/not the tooltip when mouse mover over a LINE point

LINEMouseEnterLineOpacity  
Line opacity when mouse entering the element

LINEMouseEnterLineStrokeColor  
Stroke color when mouse entering the element

LINEMouseEnterLineStrokeWidth  
Stroke width when mouse entering the element

LINEMouseLeaveDisplay  
Default False, show/not the tooltip when mouse mover leave a LINE point

LINEMouseLeaveLineOpacity  
Line opacity when mouse leaving the element

LINEMouseLeaveLineStrokeColor  
Stroke color when mouse leaving the element

LINEMouseLeaveLineStrokeWidth  
Stroke width when mouse leaving the element

LINEMouseMoveDisplay  
Default False, show/not the tooltip when mouse move into a LINE point

LINEMouseMoveLineOpacity  
Line opacity when mouse moving in the element

LINEMouseMoveLineStrokeColor  
Stroke color when mouse moving in the element

LINEMouseMoveLineStrokeWidth  
Stroke width when mouse moving in the element

LINEMouseOutDisplay  
Default False, hide/not tooltip when mouse is not hovering a LINE point anymore

LINEMouseOutAnimationTime  
Animation time when mouse moving out the element

LINEMouseOutLineOpacity  
Line opacity when mouse moving out the element

LINEMouseOutLineStrokeColor  
Stroke color when mouse moving out the element

LINEMouseOutLineStrokeWidth  
Stroke width when mouse moving out the element

LINEMouseUpDisplay  
Default False, show/not the tooltip when mouse click up a LINE point

LINEMouseUpLineOpacity  
Line opacity when mouse moving up the element

LINEMouseUpLineStrokeColor  
Stroke color when mouse moving up the element

LINEMouseUpLineStrokeWidth  
Stroke width when mouse moving up the element

LINEMouseOverDisplay  
Default False, show/not the tooltip when mouse hover on a LINE point

LINEMouseOverLineOpacity  
     Line opacity when mouse moving over the element  
 LINEMouseOverLineStrokeColor  
     Stroke color when mouse moving over the element  
 LINEMouseOverLineStrokeWidth  
     Stroke width when mouse moving over the element  
 LINEMouseOverTooltipsSetting  
     Default "style1"  
 LINEMouseOverTooltipsHtml  
     Default " "  
 LINEMouseOverTooltipsPosition  
     Default "absolute"  
 LINEMouseOverTooltipsBackgroundColor  
     Default "white"  
 LINEMouseOverTooltipsBorderStyle  
     Default "solid"  
 LINEMouseOverTooltipsBorderWidth  
     Default 0  
 LINEMouseOverTooltipsPadding  
     Default "3px"  
 LINEMouseOverTooltipsBorderRadius  
     Default "3px"  
 LINEMouseOverTooltipsOpacity  
     Default 0.8  
 WIGMouseEvent   Default True, open/not open mouse event of WIG module  
 WIGMouseClickedDisplay  
     Default False, show/not the tooltip when mouse click on a WIG point  
 WIGMouseClickedLineOpacity  
     Line opacity when mouse clicking the element  
 WIGMouseClickedLineStrokeColor  
     Stroke color when mouse clicking the element  
 WIGMouseClickedLineStrokeWidth  
     Stroke width when mouse clicking the element  
 WIGMouseClickedFillColor  
     Filling color when mouse clicking the element  
 WIGMouseDownDisplay  
     Default False, show/not the tooltip when mouse click down a WIG point  
 WIGMouseDownLineOpacity  
     Line opacity when mouse moving down the element  
 WIGMouseDownLineStrokeColor  
     Stroke color when mouse moving down the element  
 WIGMouseDownLineStrokeWidth  
     Stroke width when mouse moving down the element  
 WIGMouseDownFillColor  
     Filling color when mouse moving down the element

WIGMouseEnterDisplay  
Default False, show/not the tooltip when mouse mover over a WIG point

WIGMouseEnterLineOpacity  
Line opacity when mouse entering the element

WIGMouseEnterLineStrokeColor  
Stroke color when mouse entering the element

WIGMouseEnterLineStrokeWidth  
Stroke width when mouse entering the element

WIGMouseEnterFillColor  
Filling color when mouse entering the element

WIGMouseLeaveDisplay  
Default False, show/not the tooltip when mouse mover leave a WIG point

WIGMouseLeaveLineOpacity  
Line opacity when mouse leaving the element

WIGMouseLeaveLineStrokeColor  
Stroke color when mouse leaving the element

WIGMouseLeaveLineStrokeWidth  
Stroke width when mouse leaving the element

WIGMouseLeaveFillColor  
Filling color when mouse leaving the element

WIGMouseMoveDisplay  
Default False, show/not the tooltip when mouse move into a WIG point

WIGMouseMoveLineOpacity  
Line opacity when mouse moving in the element

WIGMouseMoveLineStrokeColor  
Stroke color when mouse moving in the element

WIGMouseMoveLineStrokeWidth  
Stroke width when mouse moving in the element

WIGMouseMoveFillColor  
Filling color when mouse leaving the element

WIGMouseOutDisplay  
Defalut False, hide/not tooltip when mouse is not hovering a WIG point anymore

WIGMouseOutAnimationTime  
Animation time when mouse moving out the element

WIGMouseOutLineOpacity  
Line opacity when mouse moving out the element

WIGMouseOutLineStrokeColor  
Stroke color when mouse moving out the element

WIGMouseOutLineStrokeWidth  
Stroke width when mouse moving out the element

WIGMouseOutFillColor  
Filling color when mouse moving out the element

WIGMouseUpDisplay  
Default False, show/not the tooltip when mouse click up a WIG point

WIGMouseUpLineOpacity  
     Line opacity when mouse moving up the element  
 WIGMouseUpLineStrokeColor  
     Stroke color when mouse moving up the element  
 WIGMouseUpLineStrokeWidth  
     Stroke width when mouse moving up the element  
 WIGMouseUpFillColor  
     Filling color when mouse moving up the element  
 WIGMouseOverDisplay  
     Default False, show/not the tooltip when mouse hover on a WIG point  
 WIGMouseOverLineOpacity  
     Line opacity when mouse moving over the element  
 WIGMouseOverLineStrokeColor  
     Stroke color when mouse moving over the element  
 WIGMouseOverLineStrokeWidth  
     Stroke width when mouse moving over the element  
 WIGMouseOverFillColor  
     Filling color when mouse moving over the element  
 WIGMouseOverTooltipsSetting  
     Default "style1"  
 WIGMouseOverTooltipsHtml  
     Default " "  
 WIGMouseOverTooltipsPosition  
     Default "absolute"  
 WIGMouseOverTooltipsBackgroundColor  
     Default "white"  
 WIGMouseOverTooltipsBorderStyle  
     Default "solid"  
 WIGMouseOverTooltipsBorderWidth  
     Default 0  
 WIGMouseOverTooltipsPadding  
     Default "3px"  
 WIGMouseOverTooltipsBorderRadius  
     Default "3px"  
 WIGMouseOverTooltipsOpacity  
     Default 0.8  
 SCATTERxlink     Default False, add/not xlink for SCATTER module  
 SCATTERMouseEvent  
     Default True, open/not open mouse event of SCATTER module  
 SCATTERMouseClickedDisplay  
     Default False, show/not the tooltip when mouse click on a SCATTER point  
 SCATTERMouseClickedColor  
     Color when mouse clicking the element  
 SCATTERMouseClickedCircleSize  
     Circle size when mouse clicking the element

SCATTERMouseClickedCircleOpacity  
Circle opacity when mouse clicking the element

SCATTERMouseClickedCircleStrokeColor  
Circle stroke color when mouse clicking the element

SCATTERMouseClickedCircleStrokeWidth  
Circle stroke width when mouse clicking the element

SCATTERMouseClickedTextFromData  
Text column when mouse clicking the element

SCATTERMouseClickedTextOpacity  
Text opacity when mouse clicking the element

SCATTERMouseClickedTextColor  
Text color when mouse clicking the element

SCATTERMouseClickedTextSize  
Text size when mouse clicking the element

SCATTERMouseClickedTextPostionX, SCATTERMouseClickedTextPostionY  
Text coordinates when mouse clicking the element

SCATTERMouseClickedTextDrag  
Whether text is draggable when clicing element

SCATTERMouseDownDisplay  
Default False, show/not the tooltip when mouse click down a SCATTER point

SCATTERMouseDownColor  
Color when mouse moving down the element

SCATTERMouseDownCircleSize  
Circle size when mouse moving down the element

SCATTERMouseDownCircleOpacity  
Circle opacity when mouse moving down the element

SCATTERMouseDownCircleStrokeColor  
Circle stroke color when mouse moving down the element

SCATTERMouseDownCircleStrokeWidth  
Circle stroke width when mouse moving down the element

SCATTERMouseEnterDisplay  
Default False, show/not the tooltip when mouse mover over a SCATTER point

SCATTERMouseEnterColor  
Color when mouse entering the element

SCATTERMouseEnterCircleSize  
Circle size when mouse entering the element

SCATTERMouseEnterCircleOpacity  
Circle opacity when mouse entering the element

SCATTERMouseEnterCircleStrokeColor  
Circle stroke color when mouse entering the element

SCATTERMouseEnterCircleStrokeWidth  
Circle stroke width when mouse entering the element

SCATTERMouseLeaveDisplay  
Default False, show/not the tooltip when mouse mover leave a SCATTER point

SCATTERMouseLeaveColor  
Color when mouse leaving the element

SCATTERMouseLeaveCircleSize  
Circle size when mouse leaving the element

SCATTERMouseLeaveCircleOpacity  
Circle opacity when mouse leaving the element

SCATTERMouseLeaveCircleStrokeColor  
Circle stroke color when mouse leaving the element

SCATTERMouseLeaveCircleStrokeWidth  
Circle stroke width when mouse leaving the element

SCATTERMouseMoveDisplay  
Default False, show/not the tooltip when mouse move into a SCATTER point

SCATTERMouseMoveColor  
Color when mouse moving in the element

SCATTERMouseMoveCircleSize  
Circle size when mouse moving in the element

SCATTERMouseMoveCircleOpacity  
Circle opacity when mouse moving in the element

SCATTERMouseMoveCircleStrokeColor  
Circle stroke color when mouse moving in the element

SCATTERMouseMoveCircleStrokeWidth  
Circle stroke width when mouse moving in the element

SCATTERMouseOutDisplay  
Default False, hide/not tooltip when mouse is not hovering a SCATTER point anymore

SCATTERMouseOutAnimationTime  
Animation time when mouse moving out the element

SCATTERMouseOutColor  
Color when mouse moving out the element

SCATTERMouseOutCircleSize  
Circle size when mouse moving out the element

SCATTERMouseOutCircleOpacity  
Circle opacity when mouse moving out the element

SCATTERMouseOutCircleStrokeColor  
Circle stroke color when mouse moving out the element

SCATTERMouseOutCircleStrokeWidth  
Circle stroke width when mouse moving out the element

SCATTERMouseUpDisplay  
Default False, show/not the tooltip when mouse click up a SCATTER point

SCATTERMouseUpColor  
Color when mouse moving up the element

SCATTERMouseUpCircleSize  
Circle size when mouse moving up the element

SCATTERMouseUpCircleOpacity  
Circle opacity when mouse moving up the element

SCATTERMouseUpCircleStrokeColor  
Circle stroke color when mouse moving up the element

SCATTERMouseUpCircleStrokeWidth  
Circle stroke width when mouse moving up the element

SCATTERMouseOverDisplay  
Default False, show/not the tooltip when mouse hover on a SCATTER point

SCATTERMouseOverColor  
Color when mouse moving over the element

SCATTERMouseOverCircleSize  
Circle size when mouse moving over the element

SCATTERMouseOverCircleOpacity  
Circle opacity when mouse moving over the element

SCATTERMouseOverCircleStrokeColor  
Circle stroke color when mouse moving over the element

SCATTERMouseOverCircleStrokeWidth  
Circle stroke width when mouse moving over the element

SCATTERMouseOverTooltipsSetting  
Default "style1"

SCATTERMouseOverTooltipsHtml  
Default " "

SCATTERMouseOverTooltipsPosition  
Default "absolute"

SCATTERMouseOverTooltipsBackgroundColor  
Default "white"

SCATTERMouseOverTooltipsBorderStyle  
Default "solid"

SCATTERMouseOverTooltipsBorderWidth  
Default 0

SCATTERMouseOverTooltipsPadding  
Default "3px"

SCATTERMouseOverTooltipsBorderRadius  
Default "3px"

SCATTERMouseOverTooltipsOpacity  
Default 0.8

ARCxlink  
Default False, add/not xlink for ARC module

ARCMouseEvent  
Default True, open/not open mouse event of ARC module

ARCMouseClickDisplay  
Default False, show/not the tooltip when mouse click on a ARC point

ARCMouseClickColor  
Color when mouse clicking the element

ARCMouseClickArcOpacity  
Arc opacity when mouse clicking the element

ARCMouseClickArcStrokeColor  
Arc stroke color when mouse clicking the element

ARCMouseClickArcStrokeWidth  
Arc stroke width when mouse clicking the element

ARCMouseClickTextFromData  
Text column when mouse clicking the element

ARCMouseClickTextOpacity  
Text opacity when mouse clicking the element

ARCMouseClickTextColor  
Text color when mouse clicking the element

ARCMouseClickTextSize  
Text size when mouse clicking the element

ARCMouseClickTextPostionX, ARCMouseClickTextPostionY  
Text coordinates when mouse clicking the element

ARCMouseClickTextDrag  
Whether text is draggable when mouse clicking the element

ARCMouseDownDisplay  
Default False, show/not the tooltip when mouse click down a ARC point

ARCMouseDownColor  
Color when mouse moving down the element

ARCMouseDownArcOpacity  
Arc opacity when mouse moving down the element

ARCMouseDownArcStrokeColor  
Arc stroke color when mouse moving down the element

ARCMouseDownArcStrokeWidth  
Arc stroke width when mouse moving down the element

ARCMouseEnterDisplay  
Default False, show/not the tooltip when mouse mover over a ARC point

ARCMouseEnterColor  
Color when mouse entering the element

ARCMouseEnterArcOpacity  
Arc opacity when mouse entering the element

ARCMouseEnterArcStrokeColor  
Arc stroke color when mouse entering the element

ARCMouseEnterArcStrokeWidth  
Arc stroke width when mouse entering the element

ARCMouseLeaveDisplay  
Default False, show/not the tooltip when mouse mover leave a ARC point

ARCMouseLeaveColor  
Color when mouse leaving the element

ARCMouseLeaveArcOpacity  
Arc opacity when mouse leaving the element

ARCMouseLeaveArcStrokeColor  
Arc stroke color when mouse leaving the element

ARCMouseLeaveArcStrokeWidth  
Arc stroke width when mouse leaving the element



ARCMouseMoveDisplay  
Default False, show/not the tooltip when mouse move into a ARC point

ARCMouseMoveColor  
Color when mouse moving in the element

ARCMouseMoveArcOpacity  
Arc opacity when mouse moving in the element

ARCMouseMoveArcStrokeColor  
Arc stroke color when mouse moving in the element

ARCMouseMoveArcStrokeWidth  
Arc stroke width when mouse moving in the element

ARCMouseOutDisplay  
Default False, hide/not tooltip when mouse is not hovering a ARC point any-  
more

ARCMouseOutAnimationTime  
Animation time when mouse moving out the element

ARCMouseOutColor  
Color when mouse moving out the element

ARCMouseOutArcOpacity  
Arc opacity when mouse moving out the element

ARCMouseOutArcStrokeColor  
Arc stroke color when mouse moving out the element

ARCMouseOutArcStrokeWidth  
Arc stroke width when mouse moving out the element

ARCMouseUpDisplay  
Default False, show/not the tooltip when mouse click up a ARC point

ARCMouseUpColor  
Color when mouse moving up the element

ARCMouseUpArcOpacity  
Arc opacity when mouse moving up the element

ARCMouseUpArcStrokeColor  
Arc stroke color when mouse moving up the element

ARCMouseUpArcStrokeWidth  
Arc stroke width when mouse moving up the element

ARCMouseOverDisplay  
Default False, show/not the tooltip when mouse hover on a ARC point

ARCMouseOverColor  
Color when mouse moving over the element

ARCMouseOverArcOpacity  
Arc opacity when mouse moving over the element

ARCMouseOverArcStrokeColor  
Arc stroke color when mouse moving over the element

ARCMouseOverArcStrokeWidth  
Arc stroke width when mouse moving over the element

ARCMouseOverTooltipsSetting  
Default "style1"

```

ARCMouseOverTooltipsHtml
    Default " "
ARCMouseOverTooltipsPosition
    Default "absolute"
ARCMouseOverTooltipsBackgroundColor
    Default "white"
ARCMouseOverTooltipsBorderStyle
    Default "solid"
ARCMouseOverTooltipsBorderWidth
    Default 0
ARCMouseOverTooltipsPadding
    Default "3px"
ARCMouseOverTooltipsBorderRadius
    Default "3px"
ARCMouseOverTooltipsOpacity
    Default 0.8
GENExlink      Default False, add/not xlink for GENE module
GENEMouseEvent Default True, open/not open mouse event of GENE module
GENEMouseClickDisplay
    Default False, show/not the tooltip when mouse click on a GENE point
GENEMouseClickColor
    Color when mouse clicking the element
GENEMouseClickArcOpacity
    Arc opacity when mouse clicking the element
GENEMouseClickArcStrokeColor
    Arc stroke color when mouse clicking the element
GENEMouseClickArcStrokeWidth
    Arc stroke width when mouse clicking the element
GENEMouseClickTextFromData
    Text column when mouse clicking the element
GENEMouseClickTextOpacity
    Text opacity when mouse clicking the element
GENEMouseClickTextColor
    Text color when mouse clicking the element
GENEMouseClickTextSize
    Text size when mouse clicking the element
GENEMouseClickTextPostionX, GENEMouseClickTextPostionY
    Text coordinates when mouse clicking the element
GENEMouseClickTextDrag
    Whether text is draggable when mouse clicking the element
GENEMouseDownDisplay
    Default False, show/not the tooltip when mouse click down a GENE point
GENEMouseDownColor
    Color when mouse moving down the element

```

GENEMouseDownArcOpacity  
Arc opacity when mouse moving down the element

GENEMouseDownArcStrokeColor  
Arc stroke color when mouse moving down the element

GENEMouseDownArcStrokeWidth  
Arc stroke width when mouse moving down the element

GENEMouseEnterDisplay  
Default False, show/not the tooltip when mouse mover over a GENE point

GENEMouseEnterColor  
Color when mouse entering the element

GENEMouseEnterArcOpacity  
Arc opacity when mouse entering the element

GENEMouseEnterArcStrokeColor  
Arc stroke color when mouse entering the element

GENEMouseEnterArcStrokeWidth  
Arc stroke width when mouse entering the element

GENEMouseLeaveDisplay  
Default False, show/not the tooltip when mouse mover leave a GENE point

GENEMouseLeaveColor  
Color when mouse leaving the element

GENEMouseLeaveArcOpacity  
Arc opacity when mouse leaving the element

GENEMouseLeaveArcStrokeColor  
Arc stroke color when mouse leaving the element

GENEMouseLeaveArcStrokeWidth  
Arc stroke width when mouse leaving the element

GENEMouseMoveDisplay  
Default False, show/not the tooltip when mouse move into a GENE point

GENEMouseMoveColor  
Color when mouse moving in the element

GENEMouseMoveArcOpacity  
Arc opacity when mouse moving in the element

GENEMouseMoveArcStrokeColor  
Arc stroke color when mouse moving in the element

GENEMouseMoveArcStrokeWidth  
Arc stroke width when mouse moving in the element

GENEMouseOutDisplay  
Defalut False, hide/not tooltip when mouse is not hovering a GENE point any-  
more

GENEMouseOutAnimationTime  
Animation time when mouse moving out the element

GENEMouseOutColor  
Color when mouse moving out the element

GENEMouseOutArcOpacity  
Arc opacity when mouse moving out the element

GENEMouseOutArcStrokeColor  
     Arc stroke color when mouse moving out the element  
 GENEMouseOutArcStrokeWidth  
     Arc stroke width when mouse moving out the element  
 GENEMouseUpDisplay  
     Default False, show/not the tooltip when mouse click up a GENE point  
 GENEMouseUpColor  
     Color when mouse moving up the element  
 GENEMouseUpArcOpacity  
     Arc opacity when mouse moving up the element  
 GENEMouseUpArcStrokeColor  
     Arc stroke color when mouse moving up the element  
 GENEMouseUpArcStrokeWidth  
     Arc stroke width when mouse moving up the element  
 GENEMouseOverDisplay  
     Default False, show/not the tooltip when mouse hover on a GENE point  
 GENEMouseOverColor  
     Color when mouse moving over the element  
 GENEMouseOverArcOpacity  
     Arc opacity when mouse moving over the element  
 GENEMouseOverArcStrokeColor  
     Arc stroke color when mouse moving over the element  
 GENEMouseOverArcStrokeWidth  
     Arc stroke width when mouse moving over the element  
 GENEMouseOverTooltipsSetting  
     Default "style1"  
 GENEMouseOverTooltipsHtml  
     Default " "  
 GENEMouseOverTooltipsPosition  
     Default "absolute"  
 GENEMouseOverTooltipsBackgroundColor  
     Default "white"  
 GENEMouseOverTooltipsBorderStyle  
     Default "solid"  
 GENEMouseOverTooltipsBorderWidth  
     Default 0  
 GENEMouseOverTooltipsPadding  
     Default "3px"  
 GENEMouseOverTooltipsBorderRadius  
     Default "3px"  
 GENEMouseOverTooltipsOpacity  
     Default 0.8  
 LOLLIPOPxlink   Default False, add/not xlink for LOLLIPOP module  
 LOLLIPOPMouseEvent  
     Default True, open/not open mouse event of LOLLIPOP module

LOLLIPOPMouseClickedDisplay  
Default False, show/not the tooltip when mouse click on a LOLLIPOP point

LOLLIPOPMouseClickedColor  
Color when mouse clicking

LOLLIPOPMouseClickedCircleSize  
Circle size when mouse clicking the element

LOLLIPOPMouseClickedCircleOpacity  
Circle opacity when mouse clicking the element

LOLLIPOPMouseClickedCircleStrokeColor  
Circle stroke color when mouse clicking the element

LOLLIPOPMouseClickedCircleStrokeWidth  
Circle stroke width when mouse clicking the element

LOLLIPOPMouseClickedTextFromData  
Text column when mouse clicking the element

LOLLIPOPMouseClickedTextOpacity  
Text opacity when mouse clicking the element

LOLLIPOPMouseClickedTextColor  
Text color when mouse clicking the element

LOLLIPOPMouseClickedTextSize  
Text size when mouse clicking the element

LOLLIPOPMouseClickedTextPostionX, LOLLIPOPMouseClickedTextPostionY  
Text coordinates when mouse clicking the element

LOLLIPOPMouseClickedTextDrag  
Whether text is draggable when mouse clicking the element

LOLLIPOPMouseDownDisplay  
Default False, show/not the tooltip when mouse click down a LOLLIPOP point

LOLLIPOPMouseDownColor  
Color when mouse moving down the element

LOLLIPOPMouseDownCircleSize  
Circle size when mouse moving down the element

LOLLIPOPMouseDownCircleOpacity  
Circle opacity when mouse moving down the element

LOLLIPOPMouseDownCircleStrokeColor  
Circle stroke color when mouse moving down the element

LOLLIPOPMouseDownCircleStrokeWidth  
Circle stroke width when mouse moving down the element

LOLLIPOPMouseEnterDisplay  
Default False, show/not the tooltip when mouse mover over a LOLLIPOP point

LOLLIPOPMouseEnterColor  
Color when mouse entering the element

LOLLIPOPMouseEnterCircleSize  
Circle size when mouse entering the element

LOLLIPOPMouseEnterCircleOpacity  
Circle opacity when mouse entering the element

LOLLIPOPMouseEnterCircleStrokeColor  
Circle stroke color when mouse entering the element

LOLLIPOPMouseEnterCircleStrokeWidth  
Circle stroke width when mouse entering the element

LOLLIPOPMouseLeaveDisplay  
Default False, show/not the tooltip when mouse mover leave a LOLLIPOP point

LOLLIPOPMouseLeaveColor  
Color when mouse leaving the element

LOLLIPOPMouseLeaveCircleSize  
Circle size when mouse leaving the element

LOLLIPOPMouseLeaveCircleOpacity  
Circle opacity when mouse leaving the element

LOLLIPOPMouseLeaveCircleStrokeColor  
Circle stroke color when mouse leaving the element

LOLLIPOPMouseLeaveCircleStrokeWidth  
Circle stroke width when mouse leaving the element

LOLLIPOPMouseMoveDisplay  
Default False, show/not the tooltip when mouse move into a LOLLIPOP point

LOLLIPOPMouseMoveColor  
Color when mouse moving in the element

LOLLIPOPMouseMoveCircleSize  
Circle size when mouse moving in the element

LOLLIPOPMouseMoveCircleOpacity  
Circle opacity when mouse moving in the element

LOLLIPOPMouseMoveCircleStrokeColor  
Circle stroke color when mouse moving in the element

LOLLIPOPMouseMoveCircleStrokeWidth  
Circle stroke width when mouse moving in the element

LOLLIPOPMouseOutDisplay  
Defalut False, hide/not tooltip when mouse is not hovering a LOLLIPOP point anymore

LOLLIPOPMouseOutAnimationTime  
Animation time when mouse moving out the element

LOLLIPOPMouseOutColor  
Color when mouse moving out the element

LOLLIPOPMouseOutCircleSize  
Circle size when mouse moving out the element

LOLLIPOPMouseOutCircleOpacity  
Circle opacity when mouse moving out the element

LOLLIPOPMouseOutCircleStrokeColor  
Circle stroke color when mouse moving out the element

LOLLIPOPMouseOutCircleStrokeWidth  
Circle stroke width when mouse moving out the element

LOLLIPOPMouseUpDisplay  
Default False, show/not the tooltip when mouse click up a LOLLIPOP point

|                                          |                                                                          |
|------------------------------------------|--------------------------------------------------------------------------|
| LOLLIPOPMouseUpColor                     | Color when mouse moving up the element                                   |
| LOLLIPOPMouseUpCircleSize                | Circle size when mouse moving up the element                             |
| LOLLIPOPMouseUpCircleOpacity             | Circle opacity when mouse moving up the element                          |
| LOLLIPOPMouseUpCircleStrokeColor         | Circle stroke color when mouse moving up the element                     |
| LOLLIPOPMouseUpCircleStrokeWidth         | Circle stroke width when mouse moving up the element                     |
| LOLLIPOPMouseOverDisplay                 | Default False, show/not the tooltip when mouse hover on a LOLLIPOP point |
| LOLLIPOPMouseOverColor                   | Color when mouse moving over the element                                 |
| LOLLIPOPMouseOverCircleSize              | Circle size when mouse moving over the element                           |
| LOLLIPOPMouseOverCircleOpacity           | Circle opacity when mouse moving over the element                        |
| LOLLIPOPMouseOverCircleStrokeColor       | Circle stroke color when mouse moving over the element                   |
| LOLLIPOPMouseOverCircleStrokeWidth       | Circle stroke width when mouse moving over the element                   |
| LOLLIPOPMouseOverTooltipsSetting         | Default "style1"                                                         |
| LOLLIPOPMouseOverTooltipsHtml            | Default " "                                                              |
| LOLLIPOPMouseOverTooltipsPosition        | Default "absolute"                                                       |
| LOLLIPOPMouseOverTooltipsBackgroundColor | Default "white"                                                          |
| LOLLIPOPMouseOverTooltipsBorderStyle     | Default "solid"                                                          |
| LOLLIPOPMouseOverTooltipsBorderWidth     | Default 0                                                                |
| LOLLIPOPMouseOverTooltipsPadding         | Default "3px"                                                            |
| LOLLIPOPMouseOverTooltipsBorderRadius    | Default "3px"                                                            |
| LOLLIPOPMouseOverTooltipsOpacity         | Default 0.8                                                              |
| elementId                                | the name of the HTML id to be used to contain the visualization          |
| ...                                      | Ignored                                                                  |

**Value**

The main figure for interacCircos with all tracks

**Examples**

```
Circos(genome = "hg19")
```

---

CircosArc

*ARC module*


---

**Description**

Create the CNV plot without value, Gene domain, Chromosome band

**Usage**

```
CircosArc(
  modulename,
  compareGroup = 1,
  outerRadius = 150,
  innerRadius = 130,
  opacity = 1,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

**Arguments**

|                                              |                                                                                                                   |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| modulename                                   | The name of the new module                                                                                        |
| compareGroup                                 | The group number of this module in compare module                                                                 |
| innerRadius, outerRadius                     | Where the module should begin and end                                                                             |
| opacity                                      | The opacity for arc                                                                                               |
| animationDisplay                             | Whether display animation                                                                                         |
| animationTime, animationDelay, animationType | The time, delay and display type for animation                                                                    |
| data                                         | A list of arc with details including chr, start, end, color, des, link and html. Details can be found on document |
| ...                                          | Ignored                                                                                                           |

**Value**

The module tracks for arc modules



**Examples**

```
arcData<-arcExample
Circos(CircosArc('Arc01', outerRadius = 212, innerRadius = 224, data=arcData),
  genome=list("EGFR"=1211),outerRadius = 220,genomeFillColor = c("grey"))
```

CircosAuxLine

*AUXILIARYLINE module***Description**

A auxiliary line for better explanation of the visualization

**Usage**

```
CircosAuxLine(
  modulename,
  startX = 20,
  startY = 20,
  endX = 120,
  endY = 120,
  color = "red",
  width = 0.5,
  type = "straight",
  controlPointX = 0,
  controlPointY = 0,
  lineType = "solid",
  dashArray = 3,
  marker = TRUE,
  markerType = "circle",
  markerColor = "blue",
  markerHeight = 5,
  markerWidth = 5,
  markerPosition = 2,
  animationDisplay = FALSE,
  animationTime = 50,
  animationDelay = 1000,
  animationType = "linear",
  ...
)
```

**Arguments**

|                |                                      |
|----------------|--------------------------------------|
| modulename     | The name of the new module           |
| startX, startY | Start coordinates for auxiliary line |
| endX, endY     | End coordinates for auxiliary line   |

|                                              |                                                         |
|----------------------------------------------|---------------------------------------------------------|
| color                                        | Color for auxiliary line                                |
| width                                        | Width for auxiliary line                                |
| type                                         | Type for auxiliary line, could be straight/curve/broken |
| controlPointX, controlPointY                 | The middle point coordinates for curve and broken       |
| lineType                                     | Line type, could be solid/dot                           |
| dashArray                                    | The dash gap width                                      |
| marker                                       | Whether display a marker on the end of line             |
| markerType                                   | Type of marker, could be circle/square/arrow/stub       |
| markerColor, markerHeight, markerWidth       | Color, Height and Width for marker                      |
| markerPosition                               | 1 means start, 2 means end, 3 means both                |
| animationDisplay                             | whether display animation                               |
| animationTime, animationDelay, animationType | The time, delay and display type for animation          |
| ...                                          | Ignored                                                 |

Value

The module tracks for auxliary line modules

Examples

```
Circos(CircosAuxLine('AuxLine01'))
```

---

|                  |                          |
|------------------|--------------------------|
| CircosBackground | <i>BACKGROUND module</i> |
|------------------|--------------------------|

---

Description

Background for better display of other modules

Usage

```
CircosBackground(  
  modulename,  
  compareGroup = 1,  
  fillColors = "#EEEEFF",  
  borderColors = "#000000",  
  axisShow = FALSE,  
  axisColor = "#000",  
  axisOpacity = 0.5,
```

```

    axisNum = 4,
    axisWidth = 0.3,
    maxRadius = 190,
    minRadius = 105,
    borderSize = 0.3,
    animationDisplay = FALSE,
    animationTime = 2000,
    animationDelay = 20,
    animationType = "bounce",
    ...
)

```

### Arguments

|                                              |                                                      |
|----------------------------------------------|------------------------------------------------------|
| modulename                                   | The name of the new module                           |
| compareGroup                                 | The group number of this module in compare module    |
| fillColors                                   | The filling color of the module                      |
| borderColors                                 | The border color of the module                       |
| axisShow                                     | Whether show a axis or not                           |
| axisWidth, axisColor, axisOpacity, axisNum   | The color, opacity value and number of line for axis |
| minRadius, maxRadius                         | The outer and inner ring range of module             |
| borderSize                                   | The thickness of the border                          |
| animationDisplay                             | Whether display animation or not                     |
| animationTime, animationDelay, animationType | The time, delay and display type for animation       |
| ...                                          | Ignored                                              |

### Value

The module tracks for background modules.

### Examples

```
Circos(CircosBackground('bg01', fillColors="#FFEEEE", borderSize = 1))
```

CircosBubble

*BUBBLE module***Description**

Create a bubble plot

**Usage**

```
CircosBubble(
  modulename,
  compareGroup = 1,
  maxRadius = 200,
  minRadius = 50,
  blockStroke = TRUE,
  blockStrokeColor = "black",
  blockStrokeWidth = 1,
  blockFill = FALSE,
  blockFillColor = "white",
  bubbleMaxSize = 5,
  bubbleMinSize = 2,
  minColor = "red",
  maxColor = "green",
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  totalLayer = 1,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

**Arguments**

|                                   |                                                      |
|-----------------------------------|------------------------------------------------------|
| <code>modulename</code>           | The name of the new module                           |
| <code>compareGroup</code>         | The group number of this module in compare module    |
| <code>maxRadius, minRadius</code> | The outer and inner ring range of module             |
| <code>blockStroke</code>          | Whether display the stroke between each bubble block |
| <code>blockStrokeColor</code>     | Stroke color for block                               |
| <code>blockStrokeWidth</code>     | Stroke width for block                               |

|                                              |                                                                                                                                             |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| blockFill                                    | Whether fill a block or not                                                                                                                 |
| blockFillColor                               | The color for filling the block                                                                                                             |
| bubbleMaxSize                                | The max size for bubble                                                                                                                     |
| bubbleMinSize                                | The min size for bubble                                                                                                                     |
| minColor                                     | The color the bubble of min value                                                                                                           |
| maxColor                                     | The color the bubble of max value                                                                                                           |
| ValueAxisManualScale                         | Whether manually control the scale of value                                                                                                 |
| ValueAxisMaxScale, ValueAxisMinScale         | The max and min scale value for manually control                                                                                            |
| totalLayer                                   | The color and width for stroke                                                                                                              |
| animationDisplay                             | Whether display animation                                                                                                                   |
| animationTime, animationDelay, animationType | The time, delay and display type for animation                                                                                              |
| data                                         | A list of value in bubble plot with details including chr, start, end, value, name, layer, color and html. Details can be found on document |
| ...                                          | Ignored                                                                                                                                     |

## Value

The module tracks for bubble modules

## Examples

```
bubbleData<-bubbleExample
Circos(CircosBubble('Bubble01', maxRadius = 230, minRadius = 170, data=bubbleData,
blockStroke = TRUE, bubbleMaxSize=10, bubbleMinSize = 2, maxColor = "red", minColor = "yellow",
totalLayer =3, animationDisplay = TRUE, animationType="linear"),
genome = list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"= 27905053,"X"=22422827,"4"=1351857),
BUBBLEmouseoverDisplay =TRUE,innerRadius = 236)
```

## Description

Create a chord module using a data matrix

**Usage**

```

CircosChord(
  modulename,
  innerRadius = 237,
  outerRadius = 238,
  fillOpacity = 0.67,
  fillStrokeWidth = 1,
  padding = 0.06,
  autoFillColor = TRUE,
  fillColor = c("#B8B8B8"),
  fillStrokeColor = c("black"),
  outerARC = TRUE,
  outerARCAutoColor = TRUE,
  outerARCColor = c("red"),
  outerARCStrokeColor = c("black"),
  outerARCText = TRUE,
  data,
  ...
)

```

**Arguments**

|                                  |                                                        |
|----------------------------------|--------------------------------------------------------|
| <code>modulename</code>          | The name of the new module                             |
| <code>innerRadius</code>         | The inner radius for chord circle                      |
| <code>outerRadius</code>         | The outer radius for chord circle                      |
| <code>fillOpacity</code>         | The opacity for filling color                          |
| <code>fillStrokeWidth</code>     | The stroke width for chord                             |
| <code>padding</code>             | The pad of chord                                       |
| <code>autoFillColor</code>       | Whether auto assign color for chord                    |
| <code>fillColor</code>           | If not, manually assign color for chord                |
| <code>fillStrokeColor</code>     | The color for stroke                                   |
| <code>outerARC</code>            | Whether display outer arc                              |
| <code>outerARCAutoColor</code>   | If true, whether auto assign color for arc             |
| <code>outerARCColor</code>       | The manually assigned color for arc                    |
| <code>outerARCStrokeColor</code> | The stroke color for arc                               |
| <code>outerARCText</code>        | Whether display text for arc or not                    |
| <code>data</code>                | A matrix-list of chord value with relationship details |
| <code>...</code>                 | Ignored                                                |

**Value**

The module tracks for chord modules of NG-Circos

**Examples**

```
chordData<-chordExample
Circos(CircosChord('CHORD', data = chordData,innerRadius= 210,outerRadius= 211,fillOpacity=0.67,
strokeColor="black",strokeWidth= "1px",outerARCText=FALSE),genome=list("C.CK" = 189.51,"C.NPK"=188,
"GC.CK"=186.11, "GC.NPK"=191.51,"Alphaproteobacteria"=70.16,"Betaproteobacteria"=23.51,
"Gammaproteobacteria"=25.51, "Deltaproteobacteria"=23.28,"Acidobacteria"=53.62,
"Actinobacteria"=72.33, "Bacteroidetes"=22.41, "Chloroflexi"=15.08,"Firmicutes"=10.72,
"Gemmatimonadetes"=26.37, "Planctomycetes"=19.26,"Thaumarchaeota"=6.15, "Verrucomicrobia"=8.3,
"Ascomycota"=159.41, "Basidiomycota"=79.73,"Zygomycota"=139.29 ),outerRadius = 217,
genomeLabelDisplay = FALSE)
```

---

CircosChord.p

---

*CHORD module of circosJS*


---

**Description**

Create a chord module using a data path. chord.p means chord plot based on path

**Usage**

```
CircosChord.p(
  modulename,
  radius = 216,
  opacity = 0.67,
  color = "#B8B8B8",
  data,
  ...
)
```

**Arguments**

|            |                                                                                           |
|------------|-------------------------------------------------------------------------------------------|
| modulename | The name of the new module                                                                |
| radius     | The radius for chord circle                                                               |
| opacity    | The opacity for chord                                                                     |
| color      | The color for chord                                                                       |
| data       | A list of chord value with relationship details, details could be found on chord.pExample |
| ...        | Ignored                                                                                   |

**Value**

The module tracks for chord modules of circosJS

**Examples**

```
chord.pData<-chord.pExample
Circos()
```

CircosCnv

*CNV module***Description**

Create a copy number variance module

**Usage**

```
CircosCnv(
  modulename,
  compareGroup = 1,
  maxRadius = 200,
  minRadius = 190,
  width = 10,
  color = "#CAE1FF",
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  strokeColor = "black",
  strokeWidth = 1,
  opacity = 1,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 50,
  animationType = "bounce",
  data,
  ...
)
```

**Arguments**

|                      |                                                    |
|----------------------|----------------------------------------------------|
| modulename           | The name of the new module                         |
| compareGroup         | The group number of this module in compare module  |
| maxRadius, minRadius | The outer and inner ring range of module           |
| width                | Width for CNV module                               |
| color                | Color for CNV module                               |
| ValueAxisManualScale | Whether manually control the scale of value or not |



|                                              |                                                                                                                   |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| ValueAxisMaxScale, ValueAxisMinScale         | The max and min scale value for manually control                                                                  |
| strokeColor, strokeWidth                     | The color and width for stroke                                                                                    |
| opacity                                      | The opacity for module                                                                                            |
| animationDisplay                             | Whether display animationn                                                                                        |
| animationTime, animationDelay, animationType | The time, delay and display type for animationn                                                                   |
| data                                         | A list of CNV with details including start, end, value, link, color and html.<br>Details can be found on document |
| ...                                          | Ignored                                                                                                           |

**Value**

The module tracks for cnv modules

**Examples**

```
cnvData<-cnvExample
Circos(CircosCnv('Cnv01',maxRadius =175, minRadius =116, data =cnvData,width=2,color = "#4876FF")+
CircosBackground("bg01",minRadius = 116,maxRadius = 175,fillColors = "#F2F2F2",axisShow = TRUE),
CNVMouseOverDisplay = TRUE)
```

---

|            |                    |
|------------|--------------------|
| CircosGene | <i>GENE module</i> |
|------------|--------------------|

---

**Description**

Create a number of genes with different functional region

**Usage**

```
CircosGene(
  modulename,
  compareGroup = 1,
  outerRadius = 180,
  innerRadius = 150,
  pathColor = "black",
  pathWidth = 1,
  arrow = TRUE,
  arrowGap = 2,
  arrowColor = "blue",
  arrowSize = 5,
  cdsColor = "#1e77b3",
  cdsStrokeColor = "black",
```

```

    cdsStrokeWidth = 1,
    utrWidth = -5,
    utrColor = "blue",
    utrStrokeColor = "blue",
    utrStrokeWidth = 1,
    animationDisplay = FALSE,
    animationTime = 2000,
    animationDelay = 20,
    animationType = "bounce",
    data,
    ...
)

```

### Arguments

|                                                    |                                                                                                                            |
|----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| modulename                                         | The name of the new module                                                                                                 |
| compareGroup                                       | The group number of this module in compare module                                                                          |
| outerRadius, innerRadius                           | Where the module should begin and end                                                                                      |
| pathColor                                          | The color for path between gene elements                                                                                   |
| pathWidth                                          | The width for path between gene elements                                                                                   |
| arrow                                              | Whether display arrows on path                                                                                             |
| arrowGap, arrowColor, arrowSize                    | The gap, color and size for arrow                                                                                          |
| cdsColor, cdsStrokeColor, cdsStrokeWidth           | The color, stroke color and stroke width for coding                                                                        |
| utrWidth, utrColor, utrStrokeColor, utrStrokeWidth | The max size for bubble                                                                                                    |
| animationDisplay                                   | Whether display animation                                                                                                  |
| animationTime, animationDelay, animationType       | The time, delay and display type for animation                                                                             |
| data                                               | A list of gene with details including chr, strand, start, end, type, name, link and html. Details can be found on document |
| ...                                                | Ignored                                                                                                                    |

### Value

The module tracks for gene modules

### Examples

```

geneData<-geneExample
Circos(CircosGene('Gene01', outerRadius = 195, innerRadius = 180, data=geneData,arrowGap = 10,
  arrowColor = "black",arrowSize = "12px",cdsColor = "#1e77b3",cdsStrokeColor = "#1e77b3",
  cdsStrokeWidth= 5, utrWidth= -2,utrColor= "#fe7f0e",utrStrokeColor= "#fe7f0e",
  animationDisplay = TRUE),genome =list("EGFR"=1000), outerRadius = 220)

```

CircosHeatmap

*HEATMAP module***Description**

Create a heatmap plot

**Usage**

```

CircosHeatmap(
  modulename,
  compareGroup = 1,
  maxRadius = 180,
  minRadius = 100,
  minColor = "red",
  maxColor = "green",
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  totalLayer = 1,
  animationDisplay = FALSE,
  animationDirection = "O2I",
  animationColorDirection = "L2C",
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)

```

**Arguments**

|                                                   |                                                   |
|---------------------------------------------------|---------------------------------------------------|
| <code>modulename</code>                           | The name of the new module                        |
| <code>compareGroup</code>                         | The group number of this module in compare module |
| <code>maxRadius, minRadius</code>                 | Where the module should begin and end             |
| <code>minColor</code>                             | The color for heatmap of min value                |
| <code>maxColor</code>                             | The color for heatmap of max value                |
| <code>ValueAxisManualScale</code>                 | Whether manually control the scale of value       |
| <code>ValueAxisMaxScale, ValueAxisMinScale</code> | The max and min scale value for manually control  |
| <code>totalLayer</code>                           | The color and width for stroke                    |
| <code>animationDisplay</code>                     | Whether display animation                         |

|                                              |                                                                                                                                        |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| animationDirection                           | The direction for animation. O2I: from outside to inside, I2O: from inside to outside                                                  |
| animationColorDirection                      | The color changing in animation. L2C: lowest to customized, H2C: highest to customized, the customized color should be defined in data |
| animationTime, animationDelay, animationType | The time, delay and display type for animation                                                                                         |
| data                                         | A list of value in heatmap plot with details including chr, start, end, value, name, layer and html. Details can be found on document  |
| ...                                          | Ignored                                                                                                                                |

### Value

The module tracks for heatmap modules.

### Examples

```
heatmapData<-heatmapExample
Circos(CircosHeatmap('Heatmap01', maxRadius= 180, minRadius = 100, data=heatmapData,totallayer = 3),
genome = list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"=27905053,"4"=1351857,"X"=22422827),
HEATMAPMouseEvent = TRUE,HEATMAPMouseOverDisplay = TRUE)
```

---

|                 |                         |
|-----------------|-------------------------|
| CircosHistogram | <i>HISTOGRAM module</i> |
|-----------------|-------------------------|

---

### Description

Create a multi-layer histogram plot

### Usage

```
CircosHistogram(
  modulename,
  compareGroup = 1,
  maxRadius = 108,
  minRadius = 95,
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  fillColor = "red",
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  data,
  ...
)
```

**Arguments**

|                                      |                                                                                                                      |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| modulename                           | The name of the new module                                                                                           |
| compareGroup                         | The group number of this module in compare module                                                                    |
| maxRadius, minRadius                 | Where the module should begin and end                                                                                |
| ValueAxisManualScale                 | Whether manually control the scale of value                                                                          |
| ValueAxisMaxScale, ValueAxisMinScale | The max and min scale value for manually control                                                                     |
| fillColor                            | The color for histogram                                                                                              |
| animationDisplay                     | Whether display animation                                                                                            |
| animationTime, animationDelay        | The time and delay for animation                                                                                     |
| data                                 | A list of value with details including chr, start, end, name, link, value and html. Details can be found on document |
| ...                                  | Ignored                                                                                                              |

**Value**

The module tracks for histogram modules

**Examples**

```

histogramData<-histogramExample
Circos(CircosHistogram('HISTOGRAM01', data = histogramData,fillColor= "#ff7f0e",maxRadius = 210,
minRadius = 175),genome=list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"= 27905053,
"X"=22422827,"4"=1351857),
outerRadius = 220)

```

---

CircosLegend

*LEGEND module*


---

**Description**

Simple legend annotation displayed in the visualization

**Usage**

```

CircosLegend(
  modulename,
  x = 20,
  y = 20,
  title = "legend",

```

```

    size = 6,
    weight = "normal",
    GapBetweenGraphicText = 5,
    GapBetweenLines = 20,
    data,
    ...
  )

```

### Arguments

|                                    |                                                                                                                                                                            |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>modulename</code>            | The name of the new module                                                                                                                                                 |
| <code>x, y</code>                  | The coordinates if legend                                                                                                                                                  |
| <code>title</code>                 | The title for legend                                                                                                                                                       |
| <code>size</code>                  | Font size for title                                                                                                                                                        |
| <code>weight</code>                | Font weight for title. Should be either "normal", "bold", "bolder" or "lighter"                                                                                            |
| <code>GapBetweenGraphicText</code> | Gap between icon and text in legend                                                                                                                                        |
| <code>GapBetweenLines</code>       | Gap between each two lines in legend                                                                                                                                       |
| <code>data</code>                  | A list of legend with details including type, color, opacity, circleSize, rectSize, lineWidth, lineHeight, text, textSize and textWeight. Details can be found on document |
| <code>...</code>                   | Ignored                                                                                                                                                                    |

### Value

The module tracks for legend modules.

### Examples

```

legend1 <- list(type= "circle", color="#1E77B4",opacity="1.0",circleSize="8",text= "C.CK",
textSize= "14",textWeight="normal")
legend2 <- list(type= "circle", color="#AEC7E8",opacity="1.0",circleSize="8",text= "C.NPK",
textSize= "14",textWeight="normal")
Circos(CircosLegend('legend01', title = "legend",data=list(legend1,legend2),size = 20))

```

---

CircosLine

*LINE module*


---

### Description

Create a multi-layer line plot

**Usage**

```

CircosLine(
  modulename,
  compareGroup = 1,
  maxRadius = 108,
  minRadius = 95,
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  color = "red",
  width = 2,
  type = "cardinal",
  animationDisplay = FALSE,
  animationDirection = "S2E",
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)

```

**Arguments**

|                                                           |                                                                                                        |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <code>modulename</code>                                   | The name of the new module                                                                             |
| <code>compareGroup</code>                                 | The group number of this module in compare module                                                      |
| <code>maxRadius, minRadius</code>                         | Where the module should begin and end                                                                  |
| <code>ValueAxisManualScale</code>                         | Whether manually control the scale of value                                                            |
| <code>ValueAxisMaxScale, ValueAxisMinScale</code>         | The max and min scale value for manually control                                                       |
| <code>color</code>                                        | Color for line                                                                                         |
| <code>width</code>                                        | Width for line                                                                                         |
| <code>type</code>                                         | Type for line, could be linear, cardinal, basis and monotone                                           |
| <code>animationDisplay</code>                             | Whether display animation                                                                              |
| <code>animationDirection</code>                           | The direction of animation, could be S2E(start to end) or E2S(end to start)                            |
| <code>animationTime, animationDelay, animationType</code> | The time, delay and display type for animation                                                         |
| <code>data</code>                                         | A list of value with details including chr, pos, des, value and html. Details can be found on document |
| <code>...</code>                                          | Ignored                                                                                                |

**Value**

The module tracks for line modules

**Examples**

```
lineData<-lineExample
Circos(CircosLine('LINE01', data = lineData,maxRadius=200,minRadius=150,color= "#ff0031")+
CircosBackground('BG01',minRadius = 205,maxRadius = 150))
```

CircosLink

*LINK module***Description**

Create a link of two specific region in genome

**Usage**

```
CircosLink(
  modulename,
  compareGroup = 1,
  radius = 108,
  fillColor = "red",
  width = 3,
  type = "Q",
  displayLinkAxis = TRUE,
  axisColor = "#B8B8B8",
  axisWidth = 0.5,
  axisPad = 3,
  displayLinkLabel = TRUE,
  labelColor = "red",
  labelSize = 13,
  labelPad = 8,
  animationDisplay = FALSE,
  animationDirection = "1to2",
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

**Arguments**

|              |                                                   |
|--------------|---------------------------------------------------|
| modulename   | The name of the new module                        |
| compareGroup | The group number of thic module in compare module |
| radius       | Radius of link circle                             |
| fillColor    | Color for link                                    |
| width        | Width for link                                    |



|                                              |                                                                                                                                                             |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| type                                         | Type of link, could be Q/S/T                                                                                                                                |
| displayLinkAxis                              | Whether display axis for link or not                                                                                                                        |
| axisColor                                    | The color for axis                                                                                                                                          |
| axisWidth                                    | The width for axis                                                                                                                                          |
| axisPad                                      | The pad for axis                                                                                                                                            |
| displayLinkLabel                             | Whether display label for link or not                                                                                                                       |
| labelColor                                   | The color for label                                                                                                                                         |
| labelSize                                    | The size for label                                                                                                                                          |
| labelPad                                     | The pad for label                                                                                                                                           |
| animationDisplay                             | Whether display animation                                                                                                                                   |
| animationDirection                           | The direction of link animation, could be 1to2 or 2to1                                                                                                      |
| animationTime, animationDelay, animationType | The time, delay and display type for animation                                                                                                              |
| data                                         | A list of link with details including g1chr, g1start, g1end, g2chr, g2start, g2end, g1name, g2name, fusion, link and html. Details can be found on document |
| ...                                          | Ignored                                                                                                                                                     |

**Value**

The module tracks for link modules

**Examples**

```
linkData<-linkExample
Circos(CircosLink('LINK', data = linkData,LinkRadius= 140,fillColor= "#9e9ac6",width= 2,
axisPad= 3,labelPad=8,animationDisplay=TRUE,animationDirection="1to2", animationType= "linear" ))
```

**Description**

Create a lollipop plot

**Usage**

```

CircosLollipop(
  modulename,
  compareGroup = 1,
  fillColor = "#9400D3",
  secondColor = "#FFFFFF",
  pointType = "circle",
  circleSize = 2,
  diamondWidth = 10,
  diamondHeight = 5,
  rectWidth = 2,
  rectHeight = 2,
  stroke = TRUE,
  strokeColor = "#000000",
  strokeWidth = 0.5,
  lineAutoHeight = TRUE,
  lineAutoMaximumHeightZoomRate = 1,
  lineHeightRate = 0.75,
  lineWidth = 2,
  lineColor = "#000000",
  realStart = 0,
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)

```

**Arguments**

|                                          |                                                          |
|------------------------------------------|----------------------------------------------------------|
| <code>modulename</code>                  | The name of the new module                               |
| <code>compareGroup</code>                | The group number of this module in compare module        |
| <code>fillColor</code>                   | Filling color for lollipop                               |
| <code>secondColor</code>                 | Second filling color for heterogeneous lollipop          |
| <code>pointType</code>                   | The type for lollipop, could be circle, rect and diamond |
| <code>circleSize</code>                  | If circle, the size for lollipop                         |
| <code>diamondWidth, diamondHeight</code> | If diamond, the width and height for lollipop            |
| <code>rectWidth, rectHeight</code>       | If rect, the width and height for lollipop               |
| <code>stroke</code>                      | Whether display the stroke for lollipop                  |

|                                              |                                                                                                                                                                                                         |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| strokeColor, strokeWidth                     | The color and width for stroke                                                                                                                                                                          |
| lineAutoHeight                               | Whether auto assign the height for each lollipop                                                                                                                                                        |
| lineAutoMaximumHeightZoomRate                | If auto assign, the zoom rate for each lollipop                                                                                                                                                         |
| lineHeightRate                               | If manually assign, the rate of lollipop compared to real value                                                                                                                                         |
| lineWidth, lineColor                         | The width and color for the line of lollipop                                                                                                                                                            |
| realStart                                    | The real start position for data in genome                                                                                                                                                              |
| ValueAxisManualScale                         | Whether manually control the scale of value                                                                                                                                                             |
| ValueAxisMaxScale, ValueAxisMinScale         | The max and min scale value for manually control                                                                                                                                                        |
| animationDisplay                             | Whether display animation                                                                                                                                                                               |
| animationTime, animationDelay, animationType | The time, delay and display type for animation                                                                                                                                                          |
| data                                         | A list of lollipop value with details including protein, chr, pos, strand, Cancer-<br>TypeNumber, color, link, Consequence, AA_pos, AA_change, type, link and<br>html. Details can be found on document |
| ...                                          | Ignored                                                                                                                                                                                                 |

## Value

The module tracks for lollipop modules.

## Examples

```
lollipopData<-lollipopExample
arcData<-arcExample
Circos(CircosLollipop('Lollipop01', data=lollipopData, fillColor="#9400D3",
circleSize= 6, strokeColor= "#999999", strokeWidth= "1px", animationDisplay=TRUE, lineWidth= 2,
realStart= 101219350)+CircosArc('Arc01', outerRadius = 212, innerRadius = 224, data=arcData),
genome=list("EGFR"=1211),outerRadius = 220,genomeFillColor = c("grey"))
```

---

|                  |                                 |
|------------------|---------------------------------|
| CircosModuleList | <i>Create a list of modules</i> |
|------------------|---------------------------------|

---

## Description

This allows the use of the '+' and '-' operator on these lists

**Usage**

```

CircosModuleList()

## S3 method for class 'CircosModuleList'
x + ...

## S3 method for class 'CircosModuleList'
x - ...

```

**Arguments**

x                      The moduleList on which other modules should be added or removed

...                    The modules to add (as moduleLists) or to remove (as module names)

**Value**

The list of all tracks of modules.

---

CircosScatter

*SCATTER module*


---

**Description**

Create a point plot

**Usage**

```

CircosScatter(
  modulename,
  compareGroup = 1,
  radius = 140,
  innerCircleSize = 1,
  outerCircleSize = 5,
  innerCircleColor = "#F26223",
  outerCircleColor = "#F26223",
  innerPointType = "circle",
  outerPointType = "circle",
  innerrectWidth = 2,
  innerrectHeight = 2,
  outerrectWidth = 2,
  outerrectHeight = 2,
  outerCircleOpacity = 1,
  random_data = 0,
  animationDisplay = FALSE,
  animationInitialPositionX = 0,
  animationInitialPositionY = 0,
  animationTime = 2000,

```

```

    animationDelay = 20,
    animationType = "bounce",
    data,
    ...
)

```

### Arguments

|                                                      |                                                                                                                    |
|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| modulename                                           | The name of the new module                                                                                         |
| compareGroup                                         | The group number of this module in compare module                                                                  |
| radius                                               | Radius of scatter circle                                                                                           |
| innerCircleSize, outerCircleSize                     | If circle, inner and outer circle size                                                                             |
| innerCircleColor, outerCircleColor                   | If circle, inner and outer circle color                                                                            |
| innerPointType, outerPointType                       | The type for inner and outer point, could be circle or rect                                                        |
| innerrectWidth, innerrectHeight                      | If rect, inner width and height                                                                                    |
| outerrectWidth, outerrectHeight                      | If rect, inner width and height                                                                                    |
| outerCircleOpacity                                   | If circle, the opacity for outer circle                                                                            |
| random_data                                          | Scatter position fluctuation                                                                                       |
| animationDisplay                                     | Whether display animation                                                                                          |
| animationInitialPositionX, animationInitialPositionY | The initial coordinates for animation                                                                              |
| animationTime, animationDelay, animationType         | The time, delay and display type for animation                                                                     |
| data                                                 | A list of value with details including chr, start, end, name, des, link and html. Details can be found on document |
| ...                                                  | Ignored                                                                                                            |

### Value

The module tracks for scatter modules

### Examples

```

scatterData<-scatterExample
Circos(CircosScatter('SCATTER01', data = scatterData, radius=180, innerCircleColor= "#3d6390",
outerCircleColor= "#99cafe", random_data= 40))

```

CircosSnp

*SNP module***Description**

Create SNPs are defined by genomic coordinates and associated with a numerical value

**Usage**

```
CircosSnp(
  modulename,
  compareGroup = 1,
  minRadius = 153,
  maxRadius = 205,
  fillColorType = "specific",
  fillColor = "#9400D3",
  fillr2Color = c("13#ff0031", "#ff0031", "#ff0031", "#ff0031", "#ff0031"),
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
  pointType = "circle",
  circleSize = 2,
  rectWidth = 2,
  rectHeight = 2,
  animationDisplay = FALSE,
  animationInitialPositionX = 0,
  animationInitialPositionY = 0,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

**Arguments**

|                                   |                                                                              |
|-----------------------------------|------------------------------------------------------------------------------|
| <code>modulename</code>           | The name of the new module                                                   |
| <code>compareGroup</code>         | The group number of this module in compare module                            |
| <code>maxRadius, minRadius</code> | Where the module should begin and end                                        |
| <code>fillColorType</code>        | The type of filling color, could be either specific or r2(means based on r2) |
| <code>fillColor</code>            | If specific, the color for SNP filling                                       |
| <code>fillr2Color</code>          | If r2, the color for SNP filling                                             |
| <code>ValueAxisManualScale</code> | Whether manually control the scale of value                                  |

|                                                      |                                                                                                                                                |
|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| ValueAxisMaxScale, ValueAxisMinScale                 | The max and min scale value for manually control                                                                                               |
| pointType                                            | The type of SNP point, could be circle or rect                                                                                                 |
| circleSize                                           | If circle, the size for SNP circle                                                                                                             |
| rectWidth                                            | If rect, the width for SNP rect                                                                                                                |
| rectHeight                                           | If rect, the height for SNP rect                                                                                                               |
| animationDisplay                                     | Whether display animation                                                                                                                      |
| animationInitialPositionX, animationInitialPositionY | The initial position coordinates for animation                                                                                                 |
| animationTime, animationDelay, animationType         | The time, delay and display type for animation                                                                                                 |
| data                                                 | A list of SNP value with details including chr, pos, value, des, color, r2value, link, index, image and html. Details can be found on document |
| ...                                                  | Ignored                                                                                                                                        |

**Value**

The module tracks for snp modules

**Examples**

```
snpData<-snpExample
Circos(CircosSnp('SNP01', minRadius =150, maxRadius = 190, data = snpExample,fillColor= "#9ACD32",
  circleSize= 2, SNPAnimationDisplay=TRUE,SNPAnimationTime= 2000,SNPAnimationDelay= 0,
  SNPAnimationType= "linear") + CircosBackground('BG01',minRadius = 145, maxRadius = 200))
```

---

|            |                    |
|------------|--------------------|
| CircosText | <i>Text module</i> |
|------------|--------------------|

---

**Description**

Text for better explanation of other modules

**Usage**

```
CircosText(
  modulename,
  text,
  x = 0,
  y = 0,
  size = "1.2em",
  weight = "bold",
  opacity = 1,
  color = "#000000",
```

```

    rotateRate = 0,
    animationDisplay = FALSE,
    animationInitialSize = 20,
    animationInitialWeight = "bold",
    animationInitialColor = "black",
    animationInitialOpacity = 1,
    animationInitialPositionX = 0,
    animationInitialPositionY = 0,
    animationInitialRotate = 0,
    animationDelay = 50,
    animationTime = 1000,
    animationType = "linear",
    ...
)

```

### Arguments

|                                                      |                                                                                                                         |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| modulename                                           | The name of the new module                                                                                              |
| text                                                 | The details of text                                                                                                     |
| x, y                                                 | The coordinates of the text                                                                                             |
| size                                                 | Font size                                                                                                               |
| weight                                               | Font weight. Should be either "normal", "bold", "bolder" or "lighter"                                                   |
| opacity                                              | Font opacity                                                                                                            |
| color                                                | Font color                                                                                                              |
| rotateRate                                           | rotate rate for text                                                                                                    |
| animationDisplay                                     | Whether display animation or not                                                                                        |
| animationInitialSize                                 | Initial text size in animation                                                                                          |
| animationInitialWeight                               | Initial text weight in animation                                                                                        |
| animationInitialColor                                | Initial text color in animation                                                                                         |
| animationInitialOpacity                              | Initial text opacity in animation                                                                                       |
| animationInitialPositionX, animationInitialPositionY | Initial text coordinates in animation(The parameter x,y will become the final position for text if animation displayed) |
| animationInitialRotate                               | Initial rotate rate in animation                                                                                        |
| animationTime, animationDelay, animationType         | The time, delay and display type for animation                                                                          |
| ...                                                  | Ignored                                                                                                                 |

### Value

The module tracks for text modules.



Examples

```
Circos(CircosText('text01', 'Annotation', color = '#DD2222', x = -40))
```

---

|           |            |
|-----------|------------|
| CircosWig | WIG module |
|-----------|------------|

---

Description

Create a multi-layer line plot

Usage

```
CircosWig(  
  modulename,  
  compareGroup = 1,  
  maxRadius = 108,  
  minRadius = 95,  
  direction = "out",  
  ValueAxisManualScale = FALSE,  
  ValueAxisMaxScale = 10,  
  ValueAxisMinScale = 0,  
  color = "red",  
  opacity = 1,  
  strokeColor = "black",  
  strokeWidth = 1,  
  strokeType = "cardinal",  
  animationDisplay = FALSE,  
  animationTime = 2000,  
  animationDelay = 20,  
  animationType = "bounce",  
  data,  
  ...  
)
```

Arguments

- modulename            The name of the new module
- compareGroup        The group number of this module in compare module
- maxRadius, minRadius            Where the module should begin and end
- direction            The direction of plot, either inside or outside
- ValueAxisManualScale            Whether manually control the scale of value
- ValueAxisMaxScale, ValueAxisMinScale            The max and min scale value for manually control

|                                              |                                                                                                        |
|----------------------------------------------|--------------------------------------------------------------------------------------------------------|
| color                                        | Color for plot                                                                                         |
| opacity                                      | Opacity for plot                                                                                       |
| strokeColor                                  | The color for stroke                                                                                   |
| strokeWidth                                  | The width for stroke                                                                                   |
| strokeType                                   | Line type for stroke, could be linear, cardinal, basis and monotone                                    |
| animationDisplay                             | Whether display animation                                                                              |
| animationTime, animationDelay, animationType | The time, delay and display type for animation                                                         |
| data                                         | A list of value with details including chr, pos, des, value and html. Details can be found on document |
| ...                                          | Ignored                                                                                                |

Value

The module tracks for wig modules

Examples

```
wigData<-wigExample
Circos(CircosWig('WIG01', data = wigData, maxRadius= 200,minRadius= 150,strokeColor= "darkblue",
color= "lightblue",strokeType= "cardinal")+CircosBackground('BG01',minRadius = 205,maxRadius = 150)
,genome=list("chr8"=1000),outerRadius = 220)
```

---

|            |                                |
|------------|--------------------------------|
| cnvExample | <i>Cnv module example data</i> |
|------------|--------------------------------|

---

Description

The data is in matrix with column names

Usage

```
cnvExample
```

Format

- A data frame with 7 columns:
- chr** chromosome
  - start** start position
  - end** end position
  - value** value
  - link** hyperlink for cnv
  - color** color
  - html** The external html language

---

|             |                               |
|-------------|-------------------------------|
| geneExample | <i>Gene plot example data</i> |
|-------------|-------------------------------|

---

**Description**

The data is in matrix with column names

**Usage**

geneExample

**Format**

A data frame with 8 columns:

**chr** chromosome  
**strand** strand, - or +  
**start** start position  
**end** end position  
**type** region type, gene or utr or cds  
**name** name for description  
**link** hyperlink for this region  
**html** The external html language

---

|                |                                  |
|----------------|----------------------------------|
| heatmapExample | <i>Heatmap plot example data</i> |
|----------------|----------------------------------|

---

**Description**

The data is in matrix with column names

**Usage**

heatmapExample

**Format**

A data frame with 7 columns:

**chr** chromosome  
**start** start position  
**end** end position  
**name** name for description  
**value** value  
**layer** layer number  
**html** The external html language

---

|               |                          |
|---------------|--------------------------|
| hg19_ideogram | <i>Ideogram for hg19</i> |
|---------------|--------------------------|

---

**Description**

The ideogram for human hg19 reference including the color for each region

**Usage**

hg19\_ideogram

**Format**

A data frame with 4 columns:

- chr** chromosome
- start** start position
- end** end position
- color** color

---

|                  |                                    |
|------------------|------------------------------------|
| histogramExample | <i>Histogram plot example data</i> |
|------------------|------------------------------------|

---

**Description**

The data is in matrix with column names

**Usage**

histogramExample

**Format**

A data frame with 7 columns:

- chr** chromosome
- start** start position
- end** end position
- name** name for description
- link** hyperlink
- value** value
- html** The external html language

---

|             |                               |
|-------------|-------------------------------|
| lineExample | <i>Line plot example data</i> |
|-------------|-------------------------------|

---

**Description**

The data is in matrix with column names

**Usage**

lineExample

**Format**

A data frame with 5 columns:

- chr** chromosome
- pos** position
- des** description
- value** value
- html** The external html language

---

|             |                               |
|-------------|-------------------------------|
| linkExample | <i>Link plot example data</i> |
|-------------|-------------------------------|

---

**Description**

The data is in matrix with column names

**Usage**

linkExample

**Format**

A data frame with 11 columns:

- g1chr** first chromosome
- g1start** first start position
- g1end** first end position
- g2chr** second chromosome
- g2start** second start position
- g2end** second end position
- g1name** first name

- g2name** second name
- fusion** fusion name
- link** hyperlink for link line
- html** The external html language

---

|                 |                                   |
|-----------------|-----------------------------------|
| lollipopExample | <i>Lollipop plot example data</i> |
|-----------------|-----------------------------------|

---

**Description**

The data is in matrix with column names

**Usage**

lollipopExample

**Format**

A data frame with 12 columns:

- protein** protein name
- chr** chromosome
- pos** position
- strand** strand, - or +
- CancerTypeNumber** Cancer type number
- color** color
- link** hyperlink
- Consequence** consequence
- AA\_pos** AA\_pos
- AA\_change** AA\_change
- type** type for mutation,Hetero or Homo
- html** The external html language

---

|                |                                  |
|----------------|----------------------------------|
| scatterExample | <i>Scatter plot example data</i> |
|----------------|----------------------------------|

---

**Description**

The data is in matrix with column names

**Usage**

```
scatterExample
```

**Format**

A data frame with 7 columns:

**chr** chromosome

**start** start position

**end** end position

**name** name for scatter

**des** description

**link** hyperlink

**html** The external html language

---

|            |                              |
|------------|------------------------------|
| snpExample | <i>Snp plot example data</i> |
|------------|------------------------------|

---

**Description**

The data is in matrix with column names

**Usage**

```
snpExample
```

**Format**

A data frame with 10 columns:

**chr** chromosome

**pos** position

**value** value,such as p-value

**des** description

**color** color

**r2value** r2 value  
**link** hyperlink for snp  
**index** index for combination  
**image** image for combination  
**html** The external html language

---

wigExample

*Wig plot example data*

---

### Description

The data is in matrix with column names

### Usage

wigExample

### Format

A data frame with 5 columns:

**chr** chromosome  
**pos** position  
**des** description  
**value** value  
**html** The external html language



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