

# Package ‘interacCircos’

December 20, 2024

**Type** Package

**Title** The Generation of Interactive Circos Plot

**Description** Implement 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** 1.17.0

**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>

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arcExample	<i>Arc plot example data</i>
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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

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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

*Example data of chord plot of circosJS*


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### 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

*Example data of chord plot of NG-Circos*


---

### 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",
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genomeLabelDy = 0,
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compareEventGroupDistance = 0,
zoom = TRUE,
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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,
ARCMouseClickedDisplay = FALSE,
ARCMouseClickedColor = "red",
ARCMouseClickedArcOpacity = 1,
ARCMouseClickedArcStrokeColor = "none",
ARCMouseClickedArcStrokeWidth = "none",
ARCMouseClickedTextFromData = "fourth",
ARCMouseClickedTextOpacity = 1,
ARCMouseClickedTextColor = "red",
ARCMouseClickedTextSize = 8,
ARCMouseClickedTextPostionX = 1,
ARCMouseClickedTextPostionY = 10,
ARCMouseClickedTextDrag = 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",
ARCMouseOutArcStrokeWidth = "none",
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

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

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

BUBBLEMouseClickOpacity  
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

LINKMouseClickDisplay  
Default False, show/not the tooltip when mouse click on a LINK point

LINKMouseClickOpacity  
Opacity when mouse clicking

LINKMouseClickStrokeColor  
Stroke color when mouse clicking

LINKMouseClickStrokeWidth  
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-  
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 hidid

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



LINEMouseDownLineStyleColor	Stroke color when mouse moving down the element
LINEMouseDownLineStyleWidth	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
LINEMouseEnterLineStyleColor	Stroke color when mouse entering the element
LINEMouseEnterLineStyleWidth	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
LINEMouseLeaveLineStyleColor	Stroke color when mouse leaving the element
LINEMouseLeaveLineStyleWidth	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
LINEMouseMoveLineStyleColor	Stroke color when mouse moving in the element
LINEMouseMoveLineStyleWidth	Stroke width when mouse moving in the element
LINEMouseOutDisplay	Defalut False, hide/not tooltip when mouse is not hovering a LINE point any-more
LINEMouseOutAnimationTime	Animation time when mouse moving out the element
LINEMouseOutLineOpacity	Line opacity when mouse moving out the element
LINEMouseOutLineStyleColor	Stroke color when mouse moving out the element
LINEMouseOutLineStyleWidth	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
LINEMouseUpLineStyleColor	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

WIGMouseClickDisplay  
Default False, show/not the tooltip when mouse click on a WIG point

WIGMouseClickLineOpacity  
Line opacity when mouse clicking the element

WIGMouseClickLineStrokeColor  
Stroke color when mouse clicking the element

WIGMouseClickLineStrokeWidth  
Stroke width when mouse clicking the element

WIGMouseClickFillColor  
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  
Defalut 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
ARCMouseClickedDisplay	Default False, show/not the tooltip when mouse click on a ARC point
ARCMouseClickedColor	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 anymore
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 auxiliary line modules

**Examples**

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

---

CircosBackground      *BACKGROUND module*

---

**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
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. 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

*GENE module*

---

**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

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
minColor	The color for heatmap of min value
maxColor	The color for heatmap 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

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      *HISTOGRAM module*

---

**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

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

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
color	Color for line
width	Width for line
type	Type for line, could be linear, cardinal, basis and monotone
animationDisplay	Whether display animation
animationDirection	The direction of animation, could be S2E(start to end) or E2S(end to start)
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 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" ))
```

---

CircosLollipop

*LOLLIPOP module*


---

**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**

modulename	The name of the new module
compareGroup	The group number of this module in compare module
fillColor	Filling color for lollipop
secondColor	Second filling color for heterogeneous lollipop
pointType	The type for lollipop, could be circle, rect and diamond
circleSize	If circle, the size for lollipop
diamondWidth, diamondHeight	If diamond, the width and height for lollipop
rectWidth, rectHeight	If rect, the width and height for lollipop
stroke	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- TypeNumber, color, link, Consequence, AA_pos, AA_change, type, link and 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      *Create a list of modules*

---

**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	<i>SCATTER module</i>
---------------	-----------------------

---

**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

*Text module*

---

**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

*Cnv module example data*

---

**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      *Ideogram for hg19*

---

**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      *Histogram plot example data*

---

**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      *Lollipop plot example data*

---

### 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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