

# Package ‘interacCircos’

December 20, 2024

**Type** Package

**Title** The Generation of Interactive Circos Plot

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

**Version** 1.16.0

**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

*Arc plot example data*

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## Description

The data is in matrix with column names

## Usage

```
arcExample
```

## Format

A data frame with 7 columns:

**chr** chromosome

**start** start position

**end** end position

**color** color

**des** description  
**link** hyperlink  
**html** The external html language

---

bubbleExample                      *Bubble plot example data*

---

### Description

The data is in matrix with column names

### Usage

bubbleExample

### Format

A data frame with 8 columns:

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

---

chord.pExample                      *Example data of chord plot of circosJS*

---

### 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

---

Circos

*interacCircos*

---

## Description

Visualization of Interactive Circos Plot

## Usage

```
Circos(  
  moduleList = CircosModuleList(),  
  genome = "hg19",  
  genome2 = "hg19",  
  genomeFillColor = "Spectral",  
  chrPad = 0.02,  
  width = NULL,  
  height = NULL,  
  innerRadius = 216,  
  outerRadius = 240,  
  svgClassName = "interacCircos",  
  displayGenomeBorder = TRUE,  
  genomeBorderColor = "#000",  
  genomeBorderSize = 0.5,  
  genomeTicksDisplay = FALSE,  
  genomeTicksLen = 5,  
  genomeTicksColor = "#000",  
  genomeTicksTextSize = "0.6em",  
  genomeTicksRealLength = TRUE,  
  genomeTicksTextColor = "#000",  
  genomeTicksScale = 3e+07,  
  genomeTicksOffset = 0,  
  genomeLabelDisplay = TRUE,  
  genomeLabelTextSize = "10pt",  
  genomeLabelTextColor = "#000",  
  genomeLabelDx = 0,  
  genomeLabelDy = 0,  
  compareEvent = FALSE,  
  compareEventGroupGapRate = 0.1,  
  compareEventGroupDistance = 0,  
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  TEXTModuleDragEvent = FALSE,  
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  CNVMouseEvent = TRUE,  
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  CNVMouseClickedArcStrokeWidth = 0,  
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  CNVMouseClickedTextColor = "red",
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CNVMouseClickTextPostionX = 0,  
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BUBBLEMouseOutStrokeColor = "none",  
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BUBBLEMouseUpStrokeWidth = "none",  
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BUBBLEMouseOverColor = "green",  
BUBBLEMouseOverOpacity = 1,  
BUBBLEMouseOverStrokeColor = "none",  
BUBBLEMouseOverStrokeWidth = "none",  
BUBBLEMouseOverTooltipsSetting = "style1",  
BUBBLEMouseOverTooltipsHtml = " ",  
BUBBLEMouseOverTooltipsPosition = "absolute",  
BUBBLEMouseOverTooltipsBackgroundColor = "white",  
BUBBLEMouseOverTooltipsBorderStyle = "solid",  
BUBBLEMouseOverTooltipsBorderWidth = 0,  
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BUBBLEMouseOverTooltipsBorderRadius = "3px",  
BUBBLEMouseOverTooltipsOpacity = 0.8,  
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SNPMouseCombinationEvent = FALSE,  
SNPMouseCombinationImageDisplay = FALSE,
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SNPMouseCombinationImageTitleColor = "black",
SNPMouseCombinationImagePositionX = 0,
SNPMouseCombinationImagePositionY = 0,
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SNPMouseCombinationImageWidth = 300,
SNPMouseCombinationGraphDisplay = FALSE,
SNPMouseCombinationGraphTitle = "This is graph",
SNPMouseCombinationGraphTitleSize = 5,
SNPMouseCombinationGraphTitleWeight = "bold",
SNPMouseCombinationGraphTitleColor = "black",
SNPMouseCombinationGraphType = "histogram",
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SNPMouseClickCircleStrokeWidth = 0,
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WIGMouseClickedLineStrokeColor = "none",
WIGMouseClickedLineStrokeWidth = "none",
WIGMouseClickedFillColor = "none",
WIGMouseDownDisplay = FALSE,
WIGMouseDownLineOpacity = 1,
WIGMouseDownLineStrokeColor = "none",
WIGMouseDownLineStrokeWidth = "none",
WIGMouseDownFillColor = "none",
WIGMouseEnterDisplay = FALSE,
WIGMouseEnterLineOpacity = 1,
WIGMouseEnterLineStrokeColor = "none",
WIGMouseEnterLineStrokeWidth = "none",
WIGMouseEnterFillColor = "none",
WIGMouseLeaveDisplay = FALSE,
WIGMouseLeaveLineOpacity = 1,
WIGMouseLeaveLineStrokeColor = "none",
WIGMouseLeaveLineStrokeWidth = "none",
WIGMouseLeaveFillColor = "none",
WIGMouseMoveDisplay = FALSE,
WIGMouseMoveLineOpacity = 1,
WIGMouseMoveLineStrokeColor = "none",
WIGMouseMoveLineStrokeWidth = "none",
WIGMouseMoveFillColor = "none",
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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,
SCATTERMouseClickedDisplay = FALSE,
SCATTERMouseClickedColor = "red",
SCATTERMouseClickedCircleSize = 2,
SCATTERMouseClickedCircleOpacity = 1,
SCATTERMouseClickedCircleStrokeColor = "none",
SCATTERMouseClickedCircleStrokeWidth = "none",
SCATTERMouseClickedTextFromData = "fourth",
SCATTERMouseClickedTextOpacity = 1,
SCATTERMouseClickedTextColor = "red",
SCATTERMouseClickedTextSize = 8,
SCATTERMouseClickedTextPostionX = 1,
SCATTERMouseClickedTextPostionY = 10,
SCATTERMouseClickedTextDrag = 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",
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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,
```



```
ARCMouseClickTextPostionY = 10,  
ARCMouseClickTextDrag = TRUE,  
ARCMouseDownDisplay = FALSE,  
ARCMouseDownColor = "red",  
ARCMouseDownArcOpacity = 1,  
ARCMouseDownArcStrokeColor = "none",  
ARCMouseDownArcStrokeWidth = "none",  
ARCMouseEnterDisplay = FALSE,  
ARCMouseEnterColor = "red",  
ARCMouseEnterArcOpacity = 1,  
ARCMouseEnterArcStrokeColor = "none",  
ARCMouseEnterArcStrokeWidth = "none",  
ARCMouseLeaveDisplay = FALSE,  
ARCMouseLeaveColor = "red",  
ARCMouseLeaveArcOpacity = 1,  
ARCMouseLeaveArcStrokeColor = "none",  
ARCMouseLeaveArcStrokeWidth = "none",  
ARCMouseMoveDisplay = FALSE,  
ARCMouseMoveColor = "red",  
ARCMouseMoveArcOpacity = 1,  
ARCMouseMoveArcStrokeColor = "none",  
ARCMouseMoveArcStrokeWidth = "none",  
ARCMouseOutDisplay = FALSE,  
ARCMouseOutAnimationTime = 500,  
ARCMouseOutColor = "red",  
ARCMouseOutArcOpacity = 1,  
ARCMouseOutArcStrokeColor = "none",  
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",
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```
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, list("chr1"=100,"chr2"=200)
<code>genome2</code>	Second genome when compare module is applied, format is same as genome
<code>genomeFillColor</code>	Could be either a color palette from RColorBrewer, or a list of color name, for example, list("yellow", "rgb(1,255,255)")
<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 genomeTicksDisplay 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 genomeTicksDisplay is TRUE and their details are available on document

compareEvent     Default False, open/not COMPARE module  
 compareEventGroupGapRate  
                   Default 0.1, control the two-side gap rate on each group of genome  
 compareEventGroupDistance  
                   Default 0, distance between two groups of genome  
 zoom             Whether or not the plot is zoomable?  
 TEXTModuleDragEvent  
                   Are text annotations draggable?  
 CNVxlink         Default False, add/not xlink for CNV module  
 CNVMouseEvent    Default True, open/not open mouse event of CNV module  
 CNVMouseClickedDisplay  
                   Default False, show/not the tooltip when mouse click on a CNV point  
 CNVMouseClickedColor  
                   Color when mouse clicking  
 CNVMouseClickedArcOpacity  
                   Arc opacity when mouse clicking the element  
 CNVMouseClickedArcStrokeColor  
                   Arc stroke color when mouse clicking the element  
 CNVMouseClickedArcStrokeWidth  
                   Arc stroke width when mouse clicking the element  
 CNVMouseClickedTextFromData  
                   Text column when mouse clicking the element  
 CNVMouseClickedTextOpacity  
                   Text opacity when mouse clicking the element  
 CNVMouseClickedTextColor  
                   Text color when mouse clicking the element  
 CNVMouseClickedTextSize  
                   Text size when mouse clicking the element  
 CNVMouseClickedTextPostionX, CNVMouseClickedTextPostionY  
                   Text coordinates when mouse clicking the element  
 CNVMouseClickedTextDrag  
                   Whether text is draggable when mouse clicking the element  
 CNVMouseDownDisplay  
                   Default False, show/not the tooltip when mouse click down a CNV point  
 CNVMouseDownColor  
                   Color when mouse moving down the element  
 CNVMouseDownArcOpacity  
                   Arc opacity when mouse moving down the element  
 CNVMouseDownArcStrokeColor  
                   Arc stroke color when mouse moving down the element  
 CNVMouseDownArcStrokeWidth  
                   Arc stroke width when mouse moving down the element  
 CNVMouseEnterDisplay  
                   Default False, show/not the tooltip when mouse mover over a CNV point  
 CNVMouseEnterColor  
                   Color when mouse entering the element  
 CNVMouseEnterArcOpacity  
                   Arc opacity when mouse entering the element

CNVMouseEnterArcStrokeColor  
Arc stroke color when mouse entering the element

CNVMouseEnterArcStrokeWidth  
Arc stroke width when mouse entering the element

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

CNVMouseLeaveColor  
Color when mouse leaving the element

CNVMouseLeaveArcOpacity  
Arc opacity when mouse leaving the element

CNVMouseLeaveArcStrokeColor  
Arc stroke color when mouse leaving the element

CNVMouseLeaveArcStrokeWidth  
Arc stroke width when mouse leaving the element

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

CNVMouseMoveColor  
Color when mouse moving in the element

CNVMouseMoveArcOpacity  
Arc opacity when mouse moving in the element

CNVMouseMoveArcStrokeColor  
Arc stroke color when mouse moving in the element

CNVMouseMoveArcStrokeWidth  
Arc stroke width when mouse moving in the element

CNVMouseOutDisplay  
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

BUBBLEMouseClickedOpacity  
Opacity when mouse clicking

BUBBLEMouseClickedStrokeColor  
Stroke color when mouse clicking

BUBBLEMouseClickedStrokeWidth  
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  
Defalut 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  
Defalut False, hide/not tooltip when mouse is not hovering a SNP point anymore

SNPMouseOutAnimationTime  
Animation time when mouse moving over the element

SNPMouseOutColor  
Color when mouse moving over the element

SNPMouseOutCircleSize  
Circle size when mouse moving over the element

SNPMouseOutCircleOpacity  
Opacity when mouse moving over the element

SNPMouseOutCircleStrokeColor  
Stroke color when mouse moving over the element

SNPMouseOutCircleStrokeWidth  
Stroke width when mouse moving over the element

SNPMouseUpDisplay  
Default False, show/not the tooltip when mouse click up a SNP point

SNPMouseUpColor  
Color after mouse moving up the element

SNPMouseUpCircleSize  
Circle size after mouse moving up the element

SNPMouseUpCircleOpacity  
Circle opacity after mouse moving up the element

SNPMouseUpCircleStrokeColor  
Circle stroke color after mouse moving up the element

SNPMouseUpCircleStrokeWidth  
Circle stroke width after mouse moving up the element

SNPMouseOverDisplay  
Default False, show/not the tooltip when mouse hover on a SNP point

SNPMouseOverColor  
Color after mouse moving over the element

SNPMouseOverCircleSize  
Circle size after mouse moving over the element

SNPMouseOverCircleOpacity  
Circle opacity after mouse moving over the element

SNPMouseOverCircleStrokeColor  
Circle stroke color after mouse moving over the element

SNPMouseOverCircleStrokeWidth  
Circle stroke width after mouse moving over the element

SNPMouseOverTooltipsSetting  
Default "chr : "

SNPMouseOverTooltipsHtml  
Default " "

SNPMouseOverTooltipsPosition  
Position for tooltips when mouse moving over

SNPMouseOverTooltipsBackgroundColor  
Background color for tooltips when mouse moving over

SNPMouseOverTooltipsBorderStyle  
Border style for tooltips when mouse moving over

SNPMouseOverTooltipsBorderWidth  
Border width for tooltips when mouse moving over

SNPMouseOverTooltipsPadding  
Padding for tooltips when mouse moving over

SNPMouseOverTooltipsBorderRadius  
 Border radius for tooltips when mouse moving over

SNPMouseOverTooltipsOpacity  
 Opacity for tooltips when mouse moving over

LINKxlink  
 Default False, add/not xlink for LINK module

LINKMouseEvent  
 Default True, open/not open mouse event of LINK module

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

LINKMouseClickedOpacity  
 Opacity when mouse clicking

LINKMouseClickedStrokeColor  
 Stroke color when mouse clicking

LINKMouseClickedStrokeWidth  
 Stroke width when mouse clicking

LINKMouseDownDisplay  
 Default False, show/not the tooltip when mouse click down a LINK point

LINKMouseDownOpacity  
 Opacity when mouse moving down the element

LINKMouseDownStrokeColor  
 Stroke color when mouse moving down the element

LINKMouseDownStrokeWidth  
 Stroke width when mouse moving down the element

LINKMouseEnterDisplay  
 Default False, show/not the tooltip when mouse mover over a LINK point

LINKMouseEnterOpacity  
 Opacity when mouse entering the element

LINKMouseEnterStrokeColor  
 Stroke color when mouse entering the element

LINKMouseEnterStrokeWidth  
 Stroke width when mouse entering the element

LINKMouseLeaveDisplay  
 Default False, show/not the tooltip when mouse mover leave a LINK point

LINKMouseLeaveOpacity  
 Opacity when mouse leaving the element

LINKMouseLeaveStrokeColor  
 Stroke color when mouse leaving the element

LINKMouseLeaveStrokeWidth  
 Stroke width when mouse leaving the element

LINKMouseMoveDisplay  
 Default False, show/not the tooltip when mouse move into a LINK point

LINKMouseMoveOpacity  
 Opacity when mouse moving in the element

LINKMouseMoveStrokeColor  
 Stroke color when mouse moving in the element

LINKMouseMoveStrokeWidth  
 Stroke width when mouse moving in the element

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



LINKMouseOutAnimationTime	Animation time when mouse moving out the element
LINKMouseOutOpacity	Opacity when mouse moving out the element
LINKMouseOutStrokeColor	Stroke color when mouse moving out the element
LINKMouseOutStrokeWidth	Stroke width when mouse moving out the element
LINKMouseUpDisplay	Default False, show/not the tooltip when mouse click up a LINK point
LINKMouseUpOpacity	Opacity when mouse moving up the element
LINKMouseUpStrokeColor	Stroke color when mouse moving up the element
LINKMouseUpStrokeWidth	Stroke width when mouse moving up the element
LINKMouseOverDisplay	Default False, show/not the tooltip when mouse hover on a LINK point
LINKMouseOverOpacity	Opacity when mouse moving over the element
LINKMouseOverStrokeColor	Stroke color when mouse moving over the element
LINKMouseOverStrokeWidth	Stroke width when mouse moving over the element
LINKMouseOverTooltipsSetting	Default "style1"
LINKMouseOverTooltipsHtml	Default " "
LINKMouseOverTooltipsPosition	Default "absolute"
LINKMouseOverTooltipsBackgroundColor	Default "white"
LINKMouseOverTooltipsBorderStyle	Default "solid"
LINKMouseOverTooltipsBorderWidth	Default 0
LINKMouseOverTooltipsPadding	Default "3px"
LINKMouseOverTooltipsBorderRadius	Default "3px"
LINKMouseOverTooltipsOpacity	Default 0.8
LINKLabelDragEvent	Default False, draggable for the label of LINK module
CHORDMouseEvent	Default True, open/not open mouse event of CHORD module from NG-Circos
CHORDMouseFillColorExcluded	A type of color in character, chord in this color will be hided

CHORDMouseClickDisplay  
Default False, show/not the tooltip when mouse click on a CHORD point

CHORDMouseClickOpacity  
Opacity when mouse clicking

CHORDMouseClickStrokeColor  
Stroke color when mouse clicking

CHORDMouseClickStrokeWidth  
Stroke width when mouse clicking

CHORDMouseDownDisplay  
Default False, show/not the tooltip when mouse click down a CHORD point

CHORDMouseDownOpacity  
Opacity when mouse moving down the element

CHORDMouseDownStrokeColor  
Stroke color when mouse moving down the element

CHORDMouseDownStrokeWidth  
Stroke width when mouse moving down the element

CHORDMouseEnterDisplay  
Default False, show/not the tooltip when mouse mover over a CHORD point

CHORDMouseEnterOpacity  
Opacity when mouse entering the element

CHORDMouseEnterStrokeColor  
Stroke color when mouse entering the element

CHORDMouseEnterStrokeWidth  
Stroke width when mouse entering the element

CHORDMouseLeaveDisplay  
Default False, show/not the tooltip when mouse mover leave a CHORD point

CHORDMouseLeaveOpacity  
Opacity when mouse leaving the element

CHORDMouseLeaveStrokeColor  
Stroke color when mouse leaving the element

CHORDMouseLeaveStrokeWidth  
Stroke width when mouse leaving the element

CHORDMouseMoveDisplay  
Default False, show/not the tooltip when mouse move into a CHORD point

CHORDMouseMoveOpacity  
Opacity when mouse moving in the element

CHORDMouseMoveStrokeColor  
Stroke color when mouse moving in the element

CHORDMouseMoveStrokeWidth  
Stroke width when mouse moving in the element

CHORDMouseOutDisplay  
Defalut False, hide/not tooltip when mouse is not hovering a CHORD point anymore

CHORDMouseOutAnimationTime  
Animation time when mouse moving out the element

CHORDMouseOutOpacity  
Opacity when mouse moving out the element

CHORDMouseOutStrokeColor  
Stroke color when mouse moving out the element

CHORDMouseOutStrokeWidth  
Stroke width when mouse moving out the element

CHORDMouseUpDisplay  
Default False, show/not the tooltip when mouse click up a CHORD point

CHORDMouseUpOpacity  
Opacity when mouse moving up the element

CHORDMouseUpStrokeColor  
Stroke color when mouse moving up the element

CHORDMouseUpStrokeWidth  
Stroke width when mouse moving up the element

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

CHORDMouseOverOpacity  
Opacity when mouse moving over the element

CHORDMouseOverStrokeColor  
Stroke color when mouse moving over the element

CHORDMouseOverStrokeWidth  
Stroke width when mouse moving over the element

HISTOGRAMxlink Default False, add/not xlink for HISTOGRAM module

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

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

HISTOGRAMMouseClickedColor  
Color when mouse clicking

HISTOGRAMMouseClickedOpacity  
Opacity when mouse clicking

HISTOGRAMMouseClickedStrokeColor  
Stroke color when mouse clicking

HISTOGRAMMouseClickedStrokeWidth  
Stroke width when mouse clicking

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

HISTOGRAMMouseDownColor  
Color when mouse moving down the element

HISTOGRAMMouseDownOpacity  
Opacity when mouse moving up the element

HISTOGRAMMouseDownStrokeColor  
Stroke color when mouse moving up the element

HISTOGRAMMouseDownStrokeWidth  
Stroke width when mouse moving up the element

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

HISTOGRAMMouseEnterColor  
Color when mouse entering the element

HISTOGRAMMouseEnterOpacity  
Opacity when mouse entering the element

HISTOGRAMMouseEnterStrokeColor  
Stroke color when mouse entering the element

HISTOGRAMMouseEnterStrokeWidth  
Stroke width when mouse entering the element

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

HISTOGRAMMouseLeaveColor  
Color when mouse leaving the element

HISTOGRAMMouseLeaveOpacity  
Opacity when mouse leaving the element

HISTOGRAMMouseLeaveStrokeColor  
Stroke color when mouse leaving the element

HISTOGRAMMouseLeaveStrokeWidth  
Stroke width when mouse leaving the element

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

HISTOGRAMMouseMoveColor  
Color when mouse moving in the element

HISTOGRAMMouseMoveOpacity  
Opacity when mouse moving in the element

HISTOGRAMMouseMoveStrokeColor  
Stroke color when mouse moving in the element

HISTOGRAMMouseMoveStrokeWidth  
Stroke width when mouse moving in the element

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

HISTOGRAMMouseOutAnimationTime  
Animation time when mouse moving out the element

HISTOGRAMMouseOutColor  
Color when mouse moving out the element

HISTOGRAMMouseOutOpacity  
Opacity when mouse moving out the element

HISTOGRAMMouseOutStrokeColor  
Stroke color when mouse moving out the element

HISTOGRAMMouseOutStrokeWidth  
Stroke width when mouse moving out the element

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

HISTOGRAMMouseUpColor  
Color when mouse moving up the element

HISTOGRAMMouseUpOpacity  
Opacity when mouse moving up the element

HISTOGRAMMouseUpStrokeColor  
     Stroke color when mouse moving up the element  
 HISTOGRAMMouseUpStrokeWidth  
     Stroke width when mouse moving up the element  
 HISTOGRAMMouseOverDisplay  
     Default False, show/not the tooltip when mouse hover on a HISTOGRAM point  
 HISTOGRAMMouseOverColor  
     Color when mouse moving over the element  
 HISTOGRAMMouseOverOpacity  
     Opacity when mouse moving over the element  
 HISTOGRAMMouseOverStrokeColor  
     Stroke color when mouse moving over the element  
 HISTOGRAMMouseOverStrokeWidth  
     Stroke width when mouse moving over the element  
 HISTOGRAMMouseOverTooltipsSetting  
     Default "style1"  
 HISTOGRAMMouseOverTooltipsHtml  
     Default " "  
 HISTOGRAMMouseOverTooltipsPosition  
     Default "absolute"  
 HISTOGRAMMouseOverTooltipsBackgroundColor  
     Default "white"  
 HISTOGRAMMouseOverTooltipsBorderStyle  
     Default "solid"  
 HISTOGRAMMouseOverTooltipsBorderWidth  
     Default 0  
 HISTOGRAMMouseOverTooltipsPadding  
     Default "3px"  
 HISTOGRAMMouseOverTooltipsBorderRadius  
     Default "3px"  
 HISTOGRAMMouseOverTooltipsOpacity  
     Default 0.8  
 LINEMouseEvent Default True, open/not open mouse event of LINE module  
 LINEMouseClickedDisplay  
     Default False, show/not the tooltip when mouse click on a LINE point  
 LINEMouseClickedLineOpacity  
     Line opacity when mouse clicking the element  
 LINEMouseClickedLineStrokeColor  
     Stroke color when mouse clicking the element  
 LINEMouseClickedLineStrokeWidth  
     Stroke width when mouse clicking the element  
 LINEMouseDownDisplay  
     Default False, show/not the tooltip when mouse click down a LINE point  
 LINEMouseDownLineOpacity  
     Line opacity when mouse moving down the element  
 LINEMouseDownLineStrokeColor  
     Stroke color when mouse moving down the element  
 LINEMouseDownLineStrokeWidth  
     Stroke width when mouse moving down the element

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

LINEMouseEnterLineOpacity  
Line opacity when mouse entering the element

LINEMouseEnterLineStrokeColor  
Stroke color when mouse entering the element

LINEMouseEnterLineStrokeWidth  
Stroke width when mouse entering the element

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

LINEMouseLeaveLineOpacity  
Line opacity when mouse leaving the element

LINEMouseLeaveLineStrokeColor  
Stroke color when mouse leaving the element

LINEMouseLeaveLineStrokeWidth  
Stroke width when mouse leaving the element

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

LINEMouseMoveLineOpacity  
Line opacity when mouse moving in the element

LINEMouseMoveLineStrokeColor  
Stroke color when mouse moving in the element

LINEMouseMoveLineStrokeWidth  
Stroke width when mouse moving in the element

LINEMouseOutDisplay  
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

LINEMouseOutLineStrokeColor  
Stroke color when mouse moving out the element

LINEMouseOutLineStrokeWidth  
Stroke width when mouse moving out the element

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

LINEMouseUpLineOpacity  
Line opacity when mouse moving up the element

LINEMouseUpLineStrokeColor  
Stroke color when mouse moving up the element

LINEMouseUpLineStrokeWidth  
Stroke width when mouse moving up the element

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

LINEMouseOverLineOpacity  
Line opacity when mouse moving over the element

LINEMouseOverLineStrokeColor  
Stroke color when mouse moving over the element

LINEMouseOverLineStrokeWidth  
     Stroke width when mouse moving over the element  
 LINEMouseOverTooltipsSetting  
     Default "style1"  
 LINEMouseOverTooltipsHtml  
     Default " "  
 LINEMouseOverTooltipsPosition  
     Default "absolute"  
 LINEMouseOverTooltipsBackgroundColor  
     Default "white"  
 LINEMouseOverTooltipsBorderStyle  
     Default "solid"  
 LINEMouseOverTooltipsBorderWidth  
     Default 0  
 LINEMouseOverTooltipsPadding  
     Default "3px"  
 LINEMouseOverTooltipsBorderRadius  
     Default "3px"  
 LINEMouseOverTooltipsOpacity  
     Default 0.8  
 WIGMouseEvent   Default True, open/not open mouse event of WIG module  
 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 clicking 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 moves 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 moves 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 moves into a SCATTER point

SCATTERMouseMoveColor  
Color when mouse moving in the element

SCATTERMouseMoveCircleSize  
Circle size when mouse moving in the element

SCATTERMouseMoveCircleOpacity  
Circle opacity when mouse moving in the element

SCATTERMouseMoveCircleStrokeColor  
Circle stroke color when mouse moving in the element

SCATTERMouseMoveCircleStrokeWidth  
Circle stroke width when mouse moving in the element

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

SCATTERMouseOutAnimationTime  
Animation time when mouse moving out the element

SCATTERMouseOutColor  
Color when mouse moving out the element

SCATTERMouseOutCircleSize  
Circle size when mouse moving out the element

SCATTERMouseOutCircleOpacity  
Circle opacity when mouse moving out the element

SCATTERMouseOutCircleStrokeColor  
Circle stroke color when mouse moving out the element

SCATTERMouseOutCircleStrokeWidth  
Circle stroke width when mouse moving out the element

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

SCATTERMouseUpColor  
Color when mouse moving up the element

SCATTERMouseUpCircleSize  
Circle size when mouse moving up the element

SCATTERMouseUpCircleOpacity  
Circle opacity when mouse moving up the element

SCATTERMouseUpCircleStrokeColor  
Circle stroke color when mouse moving up the element

SCATTERMouseUpCircleStrokeWidth  
Circle stroke width when mouse moving up the element

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

SCATTERMouseOverColor  
Color when mouse moving over the element

SCATTERMouseOverCircleSize  
Circle size when mouse moving over the element

SCATTERMouseOverCircleOpacity  
Circle opacity when mouse moving over the element

SCATTERMouseOverCircleStrokeColor  
Circle stroke color when mouse moving over the element

SCATTERMouseOverCircleStrokeWidth  
Circle stroke width when mouse moving over the element

SCATTERMouseOverTooltipsSetting  
Default "style1"

SCATTERMouseOverTooltipsHtml  
Default " "

SCATTERMouseOverTooltipsPosition  
Default "absolute"

SCATTERMouseOverTooltipsBackgroundColor  
Default "white"

SCATTERMouseOverTooltipsBorderStyle  
     Default "solid"  
 SCATTERMouseOverTooltipsBorderWidth  
     Default 0  
 SCATTERMouseOverTooltipsPadding  
     Default "3px"  
 SCATTERMouseOverTooltipsBorderRadius  
     Default "3px"  
 SCATTERMouseOverTooltipsOpacity  
     Default 0.8  
 ARCxlink            Default False, add/not xlink for ARC module  
 ARCMouseEvent    Default True, open/not open mouse event of ARC module  
 ARCMouseClickedDisplay  
     Default False, show/not the tooltip when mouse click on a ARC point  
 ARCMouseClickedColor  
     Color when mouse clicking the element  
 ARCMouseClickedArcOpacity  
     Arc opacity when mouse clicking the element  
 ARCMouseClickedArcStrokeColor  
     Arc stroke color when mouse clicking the element  
 ARCMouseClickedArcStrokeWidth  
     Arc stroke width when mouse clicking the element  
 ARCMouseClickedTextFromData  
     Text column when mouse clicking the element  
 ARCMouseClickedTextOpacity  
     Text opacity when mouse clicking the element  
 ARCMouseClickedTextColor  
     Text color when mouse clicking the element  
 ARCMouseClickedTextSize  
     Text size when mouse clicking the element  
 ARCMouseClickedTextPostionX, ARCMouseClickedTextPostionY  
     Text coordinates when mouse clicking the element  
 ARCMouseClickedTextDrag  
     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  
Defalut False, hide/not tooltip when mouse is not hovering a ARC point any-  
more

ARCMouseOutAnimationTime  
Animation time when mouse moving out the element

ARCMouseOutColor  
Color when mouse moving out the element

ARCMouseOutArcOpacity  
Arc opacity when mouse moving out the element

ARCMouseOutArcStrokeColor  
Arc stroke color when mouse moving out the element

ARCMouseOutArcStrokeWidth  
Arc stroke width when mouse moving out the element

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

ARCMouseUpColor  
Color when mouse moving up the element

ARCMouseUpArcOpacity  
Arc opacity when mouse moving up the element

ARCMouseUpArcStrokeColor  
Arc stroke color when mouse moving up the element

ARCMouseUpArcStrokeWidth  
Arc stroke width when mouse moving up the element

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

ARCMouseOverColor  
Color when mouse moving over the element

ARCMouseOverArcOpacity  
Arc opacity when mouse moving over the element

ARCMouseOverArcStrokeColor  
Arc stroke color when mouse moving over the element

ARCMouseOverArcStrokeWidth  
Arc stroke width when mouse moving over the element

ARCMouseOverTooltipsSetting  
Default "style1"

ARCMouseOverTooltipsHtml  
Default " "

ARCMouseOverTooltipsPosition  
Default "absolute"

ARCMouseOverTooltipsBackgroundColor  
Default "white"

ARCMouseOverTooltipsBorderStyle  
Default "solid"

ARCMouseOverTooltipsBorderWidth  
Default 0

ARCMouseOverTooltipsPadding  
Default "3px"

ARCMouseOverTooltipsBorderRadius  
Default "3px"

ARCMouseOverTooltipsOpacity  
Default 0.8

GENExlink  
Default False, add/not xlink for GENE module

GENEMouseEvent  
Default True, open/not open mouse event of GENE module

GENEMouseClickDisplay  
Default False, show/not the tooltip when mouse click on a GENE point

GENEMouseClickColor  
Color when mouse clicking the element

GENEMouseClickArcOpacity  
Arc opacity when mouse clicking the element

GENEMouseClickArcStrokeColor  
Arc stroke color when mouse clicking the element

GENEMouseClickArcStrokeWidth  
Arc stroke width when mouse clicking the element

GENEMouseClickTextFromData  
Text column when mouse clicking the element

GENEMouseClickTextOpacity  
Text opacity when mouse clicking the element

GENEMouseClickTextColor  
Text color when mouse clicking the element

GENEMouseClickTextSize  
Text size when mouse clicking the element

GENEMouseClickTextPostionX, GENEMouseClickTextPostionY  
Text coordinates when mouse clicking the element

GENEMouseClickTextDrag  
Whether text is draggable when mouse clicking the element

GENEMouseDownDisplay  
Default False, show/not the tooltip when mouse click down a GENE point

GENEMouseDownColor  
Color when mouse moving down the element

GENEMouseDownArcOpacity  
Arc opacity when mouse moving down the element

GENEMouseDownArcStrokeColor  
Arc stroke color when mouse moving down the element

GENEMouseDownArcStrokeWidth  
Arc stroke width when mouse moving down the element

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

GENEMouseEnterColor  
Color when mouse entering the element

GENEMouseEnterArcOpacity  
Arc opacity when mouse entering the element

GENEMouseEnterArcStrokeColor  
Arc stroke color when mouse entering the element

GENEMouseEnterArcStrokeWidth  
Arc stroke width when mouse entering the element

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

GENEMouseLeaveColor  
Color when mouse leaving the element

GENEMouseLeaveArcOpacity  
Arc opacity when mouse leaving the element

GENEMouseLeaveArcStrokeColor  
Arc stroke color when mouse leaving the element

GENEMouseLeaveArcStrokeWidth  
Arc stroke width when mouse leaving the element

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

GENEMouseMoveColor  
Color when mouse moving in the element

GENEMouseMoveArcOpacity  
Arc opacity when mouse moving in the element

GENEMouseMoveArcStrokeColor  
Arc stroke color when mouse moving in the element

GENEMouseMoveArcStrokeWidth  
Arc stroke width when mouse moving in the element

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

GENEMouseOutAnimationTime  
Animation time when mouse moving out the element

GENEMouseOutColor  
Color when mouse moving out the element

GENEMouseOutArcOpacity  
Arc opacity when mouse moving out the element

GENEMouseOutArcStrokeColor  
Arc stroke color when mouse moving out the element

GENEMouseOutArcStrokeWidth  
Arc stroke width when mouse moving out the element

GENEMouseUpDisplay  
Default False, show/not the tooltip when mouse click up a GENE point

GENEMouseUpColor  
Color when mouse moving up the element

GENEMouseUpArcOpacity  
Arc opacity when mouse moving up the element

GENEMouseUpArcStrokeColor  
Arc stroke color when mouse moving up the element

GENEMouseUpArcStrokeWidth  
Arc stroke width when mouse moving up the element

GENEMouseOverDisplay  
Default False, show/not the tooltip when mouse hover on a GENE point

GENEMouseOverColor  
Color when mouse moving over the element

GENEMouseOverArcOpacity  
Arc opacity when mouse moving over the element

GENEMouseOverArcStrokeColor  
Arc stroke color when mouse moving over the element

GENEMouseOverArcStrokeWidth  
Arc stroke width when mouse moving over the element

GENEMouseOverTooltipsSetting  
Default "style1"

GENEMouseOverTooltipsHtml  
Default " "

GENEMouseOverTooltipsPosition  
Default "absolute"

GENEMouseOverTooltipsBackgroundColor  
Default "white"

GENEMouseOverTooltipsBorderStyle  
Default "solid"

GENEMouseOverTooltipsBorderWidth  
Default 0

GENEMouseOverTooltipsPadding  
Default "3px"

GENEMouseOverTooltipsBorderRadius  
Default "3px"

GENEMouseOverTooltipsOpacity  
Default 0.8

LOLLIPOPxlink Default False, add/not xlink for LOLLIPOP module

LOLLIPOPMouseEvent  
Default True, open/not open mouse event of LOLLIPOP module



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

LOLLIPOPMouseClickedColor  
Color when mouse clicking

LOLLIPOPMouseClickedCircleSize  
Circle size when mouse clicking the element

LOLLIPOPMouseClickedCircleOpacity  
Circle opacity when mouse clicking the element

LOLLIPOPMouseClickedCircleStrokeColor  
Circle stroke color when mouse clicking the element

LOLLIPOPMouseClickedCircleStrokeWidth  
Circle stroke width when mouse clicking the element

LOLLIPOPMouseClickedTextFromData  
Text column when mouse clicking the element

LOLLIPOPMouseClickedTextOpacity  
Text opacity when mouse clicking the element

LOLLIPOPMouseClickedTextColor  
Text color when mouse clicking the element

LOLLIPOPMouseClickedTextSize  
Text size when mouse clicking the element

LOLLIPOPMouseClickedTextPostionX, LOLLIPOPMouseClickedTextPostionY  
Text coordinates when mouse clicking the element

LOLLIPOPMouseClickedTextDrag  
Whether text is draggable when mouse clicking the element

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

LOLLIPOPMouseDownColor  
Color when mouse moving down the element

LOLLIPOPMouseDownCircleSize  
Circle size when mouse moving down the element

LOLLIPOPMouseDownCircleOpacity  
Circle opacity when mouse moving down the element

LOLLIPOPMouseDownCircleStrokeColor  
Circle stroke color when mouse moving down the element

LOLLIPOPMouseDownCircleStrokeWidth  
Circle stroke width when mouse moving down the element

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

LOLLIPOPMouseEnterColor  
Color when mouse entering the element

LOLLIPOPMouseEnterCircleSize  
Circle size when mouse entering the element

LOLLIPOPMouseEnterCircleOpacity  
Circle opacity when mouse entering the element

LOLLIPOPMouseEnterCircleStrokeColor  
Circle stroke color when mouse entering the element

LOLLIPOPMouseEnterCircleStrokeWidth  
Circle stroke width when mouse entering the element

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

LOLLIPOPMouseLeaveColor  
Color when mouse leaving the element

LOLLIPOPMouseLeaveCircleSize  
Circle size when mouse leaving the element

LOLLIPOPMouseLeaveCircleOpacity  
Circle opacity when mouse leaving the element

LOLLIPOPMouseLeaveCircleStrokeColor  
Circle stroke color when mouse leaving the element

LOLLIPOPMouseLeaveCircleStrokeWidth  
Circle stroke width when mouse leaving the element

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

LOLLIPOPMouseMoveColor  
Color when mouse moving in the element

LOLLIPOPMouseMoveCircleSize  
Circle size when mouse moving in the element

LOLLIPOPMouseMoveCircleOpacity  
Circle opacity when mouse moving in the element

LOLLIPOPMouseMoveCircleStrokeColor  
Circle stroke color when mouse moving in the element

LOLLIPOPMouseMoveCircleStrokeWidth  
Circle stroke width when mouse moving in the element

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

LOLLIPOPMouseOutAnimationTime  
Animation time when mouse moving out the element

LOLLIPOPMouseOutColor  
Color when mouse moving out the element

LOLLIPOPMouseOutCircleSize  
Circle size when mouse moving out the element

LOLLIPOPMouseOutCircleOpacity  
Circle opacity when mouse moving out the element

LOLLIPOPMouseOutCircleStrokeColor  
Circle stroke color when mouse moving out the element

LOLLIPOPMouseOutCircleStrokeWidth  
Circle stroke width when mouse moving out the element

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

LOLLIPOPMouseUpColor  
Color when mouse moving up the element

LOLLIPOPMouseUpCircleSize  
Circle size when mouse moving up the element

LOLLIPOPMouseUpCircleOpacity  
Circle opacity when mouse moving up the element

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

**Value**

The main figure for interacCircos with all tracks

**Examples**

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

CircosArc

*ARC module***Description**

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

**Usage**

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

**Arguments**

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

**Value**

The module tracks for arc modules

**Examples**

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

CircosAuxLine

*AUXILIARYLINE module***Description**

A auxiliary line for better explanation of the visualization

**Usage**

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

**Arguments**

modulename	The name of the new module
startX, startY	Start coordinates for auxiliary line
endX, endY	End coordinates for auxiliary line
color	Color for auxiliary line
width	Width for auxiliary line
type	Type for auxiliary line, could be straight/curve/broken
controlPointX, controlPointY	The middle point coordinates for curve and broken
lineType	Line type, could be solid/dot
dashArray	The dash gap width
marker	Whether display a marker on the end of line

markerType       Type of marker, could be circle/square/arrow/stub  
 markerColor, markerHeight, markerWidth  
                   Color, Height and Width for marker  
 markerPosition   1 means start, 2 means end, 3 means both  
 animationDisplay  
                   whether display animation  
 animationTime, animationDelay, animationType  
                   The time, delay and display type for animation  
 ...               Ignored

**Value**

The module tracks for 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	<i>BUBBLE module</i>
--------------	----------------------

---

**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

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
blockStroke	Whether display the stroke between each bubble block
blockStrokeColor	Stroke color for block
blockStrokeWidth	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)

```

CircosChord

*CHORD module of NG-Circos***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**

modulename	The name of the new module
innerRadius	The inner radius for chord circle
outerRadius	The outer radius for chord circle
fillOpacity	The opacity for filling color
fillStrokeWidth	The stroke width for chord
padding	The pad of chord
autoFillColor	Whether auto assign color for chord
fillColor	If not, manually assign color for chord

fillStrokeColor	The color for stroke
outerARC	Whether display outer arc
outerARCAutoColor	If true, whether auto assign color for arc
outerARCColor	The manullay assigned color for arc
outerARCStrokeColor	The stroke color for arc
outerARCText	Whether display text for arc or not
data	A matrix-list of chord value with relationship details
...	Ignored

### Value

The module tracks for chord modules of NG-Circos

### Examples

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

---

CircosChord.p

*CHORD module of circosJS*

---

### Description

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

### Usage

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

**Arguments**

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

**Value**

The module tracks for chord modules of circosJS

**Examples**

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

---

CircosCnv

*CNV module*

---

**Description**

Create a copy number variance module

**Usage**

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

**Arguments**

<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>width</code>	Width for CNV module
<code>color</code>	Color for CNV module
<code>ValueAxisManualScale</code>	Whether manually control the scale of value or not
<code>ValueAxisMaxScale, ValueAxisMinScale</code>	The max and min scale value for manually control
<code>strokeColor, strokeWidth</code>	The color and width for stroke
<code>opacity</code>	The opacity for module
<code>animationDisplay</code>	Whether display animationn
<code>animationTime, animationDelay, animationType</code>	The time, delay and display type for animationn
<code>data</code>	A list of CNV with details including start, end, value, link, color and html. Details can be found on document
<code>...</code>	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 this 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**

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
fillColorType	The type of filling color, could be either specific or r2(means based on r2)
fillColor	If specific, the color for SNP filling
fillr2Color	If r2, the color for SNP filling
ValueAxisManualScale	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

*Gene plot example data*

---

## 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

*Heatmap plot example data*

---

**Description**

The data is in matrix with column names

**Usage**

heatmapExample

**Format**

A data frame with 7 columns:

**chr** chromosome

**start** start position

**end** end position

**name** name for description

**value** value

**layer** layer number

**html** The external html language

---

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

---

**Description**

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

**Usage**

hg19\_ideogram

**Format**

A data frame with 4 columns:

**chr** chromosome

**start** start position

**end** end position

**color** color

---

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

---

**Description**

The data is in matrix with column names

**Usage**

histogramExample

**Format**

A data frame with 7 columns:

**chr** chromosome

**start** start position

**end** end position

**name** name for description

**link** hyperlink

**value** value

**html** The external html language

---

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

---

**Description**

The data is in matrix with column names

**Usage**

```
lineExample
```

**Format**

A data frame with 5 columns:

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

---

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

---

**Description**

The data is in matrix with column names

**Usage**

```
linkExample
```

**Format**

A data frame with 11 columns:

**g1chr** first chromosome  
**g1start** first start position  
**g1end** first end position  
**g2chr** second chromosome  
**g2start** second start position  
**g2end** second end position  
**g1name** first name  
**g2name** second name  
**fusion** fusion name  
**link** hyperlink for link line  
**html** The external html language



---

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

---

**Description**

The data is in matrix with column names

**Usage**

```
lollipopExample
```

**Format**

A data frame with 12 columns:

**protein** protein name

**chr** chromosome

**pos** position

**strand** strand, - or +

**CancerTypeNumber** Cancer type number

**color** color

**link** hyperlink

**Consequence** consequence

**AA\_pos** AA\_pos

**AA\_change** AA\_change

**type** type for mutation, Hetero or Homo

**html** The external html language

---

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

---

**Description**

The data is in matrix with column names

**Usage**

```
scatterExample
```

**Format**

A data frame with 7 columns:

**chr** chromosome

**start** start position

**end** end position

**name** name for scatter

**des** description

**link** hyperlink

**html** The external html language

---

snpExample

*Snp plot example data*

---

**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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