

Package ‘rNGCircos’

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Type Package

Title Next Generation Circos in R

Version 1.0.0

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Description

A R package based on NGCircos: Next-generation Circos for data visualization and interpretation

License MIT

Encoding UTF-8

LazyData true

Depends R (>= 3.1.0)

Imports RColorBrewer, htmlwidgets, jsonlite, plyr, grDevices

RoxygenNote 7.1.0

Suggests knitr, rmarkdown

VignetteBuilder knitr

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

The data is in matrix with row 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	<i>Bubble plot example data</i>
---------------	---------------------------------

Description

The data is in matrix with row 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

chordExample	<i>Chord plot example data</i>
--------------	--------------------------------

Description

The data is in matrix with row names

Usage

```
chordExample
```

Format

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

column name the name for each arc

row the order and number is same as column, representing the same items

`cnvExample`*Cnv module example data*

Description

The data is in matrix with row 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 row names

Usage`geneExample`**Format**

A data frame with 8 columns:

chr chromosome

strand strand, - or +

start start position

end end position

type region type, gene or utr or cds

name name for description

link hyperlink for this region

html The external html language

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

Description

The data is in matrix with row 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

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

Description

The data is in matrix with row 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 row 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 row 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 row 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

rNGCircos	<i>rNGCircos</i>
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Description

A R packages based on Next Generation Circos

Usage

```
rNGCircos(
  moduleList = rNGCircosModuleList(),
  genome = "hg19",
  genome2 = "hg19",
  genomeFillColor = "Spectral",
  chrPad = 0.02,
  width = NULL,
  height = NULL,
  innerRadius = 216,
```

```
outerRadius = 240,  
svgClassName = "rNGCircos",  
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genomeBorderSize = 0.5,  
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genomeTicksTextSize = "0.6em",  
genomeTicksRealLength = TRUE,  
genomeTicksTextColor = "#000",  
genomeTicksScale = 3e+07,  
genomeTicksOffset = 0,  
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genomeLabelTextSize = "10pt",  
genomeLabelTextColor = "#000",  
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genomeLabelDy = 0,  
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compareEventGroupGapRate = 0.1,  
compareEventGroupDistance = 0,  
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TEXTModuleDragEvent = FALSE,  
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CNVMouseEnterArcOpacity = 1,  
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CNVMouseLeaveArcStrokeColor = "#F26223",  
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```



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HEATMAPMouseOverTooltipsBorderStyle = "solid",
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BUBBLEMouseEnterStrokeWidth = "none",
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BUBBLEMouseLeaveStrokeColor = "none",
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```

```

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BUBBLEMouseOutOpacity = 1,
BUBBLEMouseOutStrokeColor = "none",
BUBBLEMouseOutStrokeWidth = "none",
BUBBLEMouseUpDisplay = FALSE,
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BUBBLEMouseUpOpacity = 1,
BUBBLEMouseUpStrokeColor = "none",
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BUBBLEMouseOverDisplay = FALSE,
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BUBBLEMouseOverTooltipsPosition = "absolute",
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BUBBLEMouseOverTooltipsBorderStyle = "solid",
BUBBLEMouseOverTooltipsBorderWidth = 0,
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BUBBLEMouseOverTooltipsBorderRadius = "3px",
BUBBLEMouseOverTooltipsOpacity = 0.8,
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SNPMouseCombinationEvent = FALSE,
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SNPMouseCombinationImageTitleSize = 5,
SNPMouseCombinationImageTitleWeight = "bold",
SNPMouseCombinationImageTitleColor = "black",
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SNPMouseCombinationGraphTitleSize = 5,
SNPMouseCombinationGraphTitleWeight = "bold",
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SNPMouseCombinationGraphWidth = 300,
SNPMouseCombinationGraphHistogramBarColor = "blue",

```

```

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SNPMouseCombinationGraphLineWidth = 1,
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SNPMouseCombinationGraphLinePointColor = c("blue", "orange"),
SNPMouseCombinationGraphLinePointStroke = TRUE,
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```

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```

```
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```

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LINEMouseOverTooltipsHtml = " ",

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WIGMouseMoveFillColor = "none",
WIGMouseOutDisplay = FALSE,
WIGMouseOutAnimationTime = 500,
WIGMouseOutLineOpacity = 1,
WIGMouseOutLineStrokeColor = "none",
WIGMouseOutLineStrokeWidth = "none",
WIGMouseOutFillColor = "none",
WIGMouseUpDisplay = FALSE,
WIGMouseUpLineOpacity = 1,
WIGMouseUpLineStrokeColor = "none",
WIGMouseUpLineStrokeWidth = "none",
WIGMouseUpFillColor = "none",
WIGMouseOverDisplay = FALSE,
WIGMouseOverLineOpacity = 1,
WIGMouseOverLineStrokeColor = "none",
WIGMouseOverLineStrokeWidth = "none",
WIGMouseOverFillColor = "none",
WIGMouseOverTooltipsSetting = "style1",
WIGMouseOverTooltipsHtml = " ",
WIGMouseOverTooltipsPosition = "absolute",
```

```

WIGMouseOverTooltipsBackgroundColor = "white",
WIGMouseOverTooltipsBorderStyle = "solid",
WIGMouseOverTooltipsBorderWidth = 0,
WIGMouseOverTooltipsPadding = "3px",
WIGMouseOverTooltipsBorderRadius = "3px",
WIGMouseOverTooltipsOpacity = 1,
SCATTERxlink = FALSE,
SCATTERMouseEvent = TRUE,
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",

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SCATTERMouseUpDisplay = FALSE,
SCATTERMouseUpColor = "red",
SCATTERMouseUpCircleSize = 2,
SCATTERMouseUpCircleOpacity = 1,
SCATTERMouseUpCircleStrokeColor = "none",
SCATTERMouseUpCircleStrokeWidth = "none",
SCATTERMouseOverDisplay = FALSE,
SCATTERMouseOverColor = "red",
SCATTERMouseOverCircleSize = 2,
SCATTERMouseOverCircleOpacity = 1,
SCATTERMouseOverCircleStrokeColor = "none",
SCATTERMouseOverCircleStrokeWidth = "none",
SCATTERMouseOverTooltipsSetting = "style1",
SCATTERMouseOverTooltipsHtml = " ",
SCATTERMouseOverTooltipsPosition = "absolute",
SCATTERMouseOverTooltipsBackgroundColor = "white",
SCATTERMouseOverTooltipsBorderStyle = "solid",
SCATTERMouseOverTooltipsBorderWidth = 0,
SCATTERMouseOverTooltipsPadding = "3px",
SCATTERMouseOverTooltipsBorderRadius = "3px",
SCATTERMouseOverTooltipsOpacity = 1,
ARCxlink = FALSE,
ARCMouseEvent = TRUE,
ARCMouseClickDisplay = FALSE,
ARCMouseClickColor = "red",
ARCMouseClickArcOpacity = 1,
ARCMouseClickArcStrokeColor = "none",
ARCMouseClickArcStrokeWidth = "none",
ARCMouseClickTextFromData = "fourth",
ARCMouseClickTextOpacity = 1,
ARCMouseClickTextColor = "red",
ARCMouseClickTextSize = 8,
ARCMouseClickTextPostionX = 1,
ARCMouseClickTextPostionY = 10,
ARCMouseClickTextDrag = TRUE,
ARCMouseDownDisplay = FALSE,
ARCMouseDownColor = "red",
ARCMouseDownArcOpacity = 1,
ARCMouseDownArcStrokeColor = "none",
ARCMouseDownArcStrokeWidth = "none",
ARCMouseEnterDisplay = FALSE,
ARCMouseEnterColor = "red",
ARCMouseEnterArcOpacity = 1,
ARCMouseEnterArcStrokeColor = "none",
ARCMouseEnterArcStrokeWidth = "none",
ARCMouseLeaveDisplay = FALSE,
ARCMouseLeaveColor = "red",
ARCMouseLeaveArcOpacity = 1,
ARCMouseLeaveArcStrokeColor = "none",
ARCMouseLeaveArcStrokeWidth = "none",
ARCMouseMoveDisplay = FALSE,
ARCMouseMoveColor = "red",
```

```

ARCMouseMoveArcOpacity = 1,
ARCMouseMoveArcStrokeColor = "none",
ARCMouseMoveArcStrokeWidth = "none",
ARCMouseOutDisplay = FALSE,
ARCMouseOutAnimationTime = 500,
ARCMouseOutColor = "red",
ARCMouseOutArcOpacity = 1,
ARCMouseOutArcStrokeColor = "none",
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,
GENMouseEvent = TRUE,
GENMouseClickedDisplay = FALSE,
GENMouseClickedColor = "red",
GENMouseClickedArcOpacity = 1,
GENMouseClickedArcStrokeColor = "none",
GENMouseClickedArcStrokeWidth = "none",
GENMouseClickedTextFromData = "fourth",
GENMouseClickedTextOpacity = 1,
GENMouseClickedTextColor = "red",
GENMouseClickedTextSize = 8,
GENMouseClickedTextPostionX = 1,
GENMouseClickedTextPostionY = 10,
GENMouseClickedTextDrag = TRUE,
GENMouseDownDisplay = FALSE,
GENMouseDownColor = "red",
GENMouseDownArcOpacity = 1,
GENMouseDownArcStrokeColor = "none",
GENMouseDownArcStrokeWidth = "none",
GENMouseEnterDisplay = FALSE,
GENMouseEnterColor = "red",
GENMouseEnterArcOpacity = 1,
GENMouseEnterArcStrokeColor = "none",
GENMouseEnterArcStrokeWidth = "none",

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

```

```

LOLLIPOPMouseDownCircleSize = 2,
LOLLIPOPMouseDownCircleOpacity = 1,
LOLLIPOPMouseDownCircleStrokeColor = "none",
LOLLIPOPMouseDownCircleStrokeWidth = "none",
LOLLIPOPMouseEnterDisplay = FALSE,
LOLLIPOPMouseEnterColor = "red",
LOLLIPOPMouseEnterCircleSize = 2,
LOLLIPOPMouseEnterCircleOpacity = 1,
LOLLIPOPMouseEnterCircleStrokeColor = "none",
LOLLIPOPMouseEnterCircleStrokeWidth = "none",
LOLLIPOPMouseLeaveDisplay = FALSE,
LOLLIPOPMouseLeaveColor = "red",
LOLLIPOPMouseLeaveCircleSize = 2,
LOLLIPOPMouseLeaveCircleOpacity = 1,
LOLLIPOPMouseLeaveCircleStrokeColor = "none",
LOLLIPOPMouseLeaveCircleStrokeWidth = "none",
LOLLIPOPMouseMoveDisplay = FALSE,
LOLLIPOPMouseMoveColor = "red",
LOLLIPOPMouseMoveCircleSize = 2,
LOLLIPOPMouseMoveCircleOpacity = 1,
LOLLIPOPMouseMoveCircleStrokeColor = "none",
LOLLIPOPMouseMoveCircleStrokeWidth = "none",
LOLLIPOPMouseOutDisplay = FALSE,
LOLLIPOPMouseOutAnimationTime = 500,
LOLLIPOPMouseOutColor = "red",
LOLLIPOPMouseOutCircleSize = 2,
LOLLIPOPMouseOutCircleOpacity = 1,
LOLLIPOPMouseOutCircleStrokeColor = "none",
LOLLIPOPMouseOutCircleStrokeWidth = "none",
LOLLIPOPMouseUpDisplay = FALSE,
LOLLIPOPMouseUpColor = "red",
LOLLIPOPMouseUpCircleSize = 2,
LOLLIPOPMouseUpCircleOpacity = 1,
LOLLIPOPMouseUpCircleStrokeColor = "none",
LOLLIPOPMouseUpCircleStrokeWidth = "none",
LOLLIPOPMouseOverDisplay = FALSE,
LOLLIPOPMouseOverColor = "red",
LOLLIPOPMouseOverCircleSize = 2,
LOLLIPOPMouseOverCircleOpacity = 1,
LOLLIPOPMouseOverCircleStrokeColor = "none",
LOLLIPOPMouseOverCircleStrokeWidth = "none",
LOLLIPOPMouseOverTooltipsSetting = "style1",
LOLLIPOPMouseOverTooltipsHtml = " ",
LOLLIPOPMouseOverTooltipsPosition = "absolute",
LOLLIPOPMouseOverTooltipsBackgroundColor = "white",
LOLLIPOPMouseOverTooltipsBorderStyle = "solid",
LOLLIPOPMouseOverTooltipsBorderWidth = 0,
LOLLIPOPMouseOverTooltipsPadding = "3px",
LOLLIPOPMouseOverTooltipsBorderRadius = "3px",
LOLLIPOPMouseOverTooltipsOpacity = 1,
elementId = NULL,
...

```

)

Arguments

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

CNVMouseClickTextOpacity
 Text opacity when mouse clicking the element
 CNVMouseClickTextColor
 Text color when mouse clicking the element
 CNVMouseClickTextSize
 Text size when mouse clicking the element
 CNVMouseClickTextPostionX, CNVMouseClickTextPostionY
 Text coordinates when mouse clicking the element
 CNVMouseClickTextDrag
 Whether text is draggable when mouse clicking the element
 CNVMouseDownDisplay
 Default False, show/not the tooltip when mouse click down a CNV point.
 CNVMouseDownColor
 Color when mouse moving down the element
 CNVMouseDownArcOpacity
 Arc opacity when mouse moving down the element
 CNVMouseDownArcStrokeColor
 Arc stroke color when mouse moving down the element
 CNVMouseDownArcStrokeWidth
 Arc stroke width when mouse moving down the element
 CNVMouseEnterDisplay
 Default False, show/not the tooltip when mouse mover over a CNV point.
 CNVMouseEnterColor
 Color when mouse entering the element
 CNVMouseEnterArcOpacity
 Arc opacity when mouse entering the element
 CNVMouseEnterArcStrokeColor
 Arc stroke color when mouse entering the element
 CNVMouseEnterArcStrokeWidth
 Arc stroke width when mouse entering the element
 CNVMouseLeaveDisplay
 Default False, show/not the tooltip when mouse mover leave a CNV point.
 CNVMouseLeaveColor
 Color when mouse leaving the element
 CNVMouseLeaveArcOpacity
 Arc opacity when mouse leaving the element
 CNVMouseLeaveArcStrokeColor
 Arc stroke color when mouse leaving the element
 CNVMouseLeaveArcStrokeWidth
 Arc stroke width when mouse leaving the element
 CNVMouseMoveDisplay
 Default False, show/not the tooltip when mouse move into a CNV point.
 CNVMouseMoveColor
 Color when mouse moving in the element
 CNVMouseMoveArcOpacity
 Arc opacity when mouse moving in the element
 CNVMouseMoveArcStrokeColor
 Arc stroke color when mouse moving in the element

CNVMouseMoveArcStrokeWidth	Arc stroke width when mouse moving in the element
CNVMouseOutDisplay	Default False, hide/not tooltip when mouse is not hovering a CNV point anymore.
CNVMouseOutAnimationTime	Animation time when mouse moving out the element
CNVMouseOutColor	Color when mouse moving out the element
CNVMouseOutArcOpacity	Arc opacity when mouse moving out the element
CNVMouseOutArcStrokeColor	Arc stroke color when mouse moving out the element
CNVMouseOutArcStrokeWidth	Arc stroke width when mouse moving out the element
CNVMouseUpDisplay	Default False, show/not the tooltip when mouse click up a CNV point.
CNVMouseUpColor	Color when mouse moving up the element
CNVMouseUpArcOpacity	Arc opacity when mouse clicking the element
CNVMouseUpArcStrokeColor	Arc stroke color when mouse clicking the element
CNVMouseUpArcStrokeWidth	Arc stroke width when mouse clicking the element
CNVMouseOverDisplay	Default False, show/not the tooltip when mouse hover on a CNV point.
CNVMouseOverColor	Color when mouse moving over the element
CNVMouseOverArcOpacity	Arc opacity when mouse moving over the element
CNVMouseOverArcStrokeColor	Arc stroke color when mouse moving over the element
CNVMouseOverArcStrokeWidth	Arc stroke width when mouse moving over the element
CNVMouseOverTooltipsSetting	Default "style1"
CNVMouseOverTooltipsHtml	Default " "
CNVMouseOverTooltipsPosition	Default "absolute"
CNVMouseOverTooltipsBackgroundColor	Default "white"
CNVMouseOverTooltipsBorderStyle	Default "solid"
CNVMouseOverTooltipsBorderWidth	Default 0
CNVMouseOverTooltipsPadding	Default "3px"

CNVMouseOverTooltipsBorderRadius
 Default "3px"
 CNVMouseOverTooltipsOpacity
 Default 0.8
 HEATMAPMouseEvent
 Default True, open/not open mouse event of HEATMAP module
 HEATMAPMouseClickedDisplay
 Default False, show/not the tooltip when mouse click on a HEATMAP point.
 HEATMAPMouseClickedColor
 Color when mouse clicking
 HEATMAPMouseClickedOpacity
 Opacity when mouse clicking
 HEATMAPMouseClickedStrokeColor
 Stroke color when mouse clicking
 HEATMAPMouseClickedStrokeWidth
 Stroke width when mouse clicking
 HEATMAPMouseDownDisplay
 Default False, show/not the tooltip when mouse click down a HEATMAP point.
 HEATMAPMouseDownColor
 Color when mouse moving down the element
 HEATMAPMouseDownOpacity
 Opacity when mouse moving down the element
 HEATMAPMouseDownStrokeColor
 Stroke color when mouse moving down the element
 HEATMAPMouseDownStrokeWidth
 Stroke width when mouse moving down the element
 HEATMAPMouseEnterDisplay
 Default False, show/not the tooltip when mouse mover over a HEATMAP point.
 HEATMAPMouseEnterColor
 Color when mouse entering the element
 HEATMAPMouseEnterOpacity
 Opacity when mouse entering the element
 HEATMAPMouseEnterStrokeColor
 Stroke color when mouse entering the element
 HEATMAPMouseEnterStrokeWidth
 Stroke width when mouse entering the element
 HEATMAPMouseLeaveDisplay
 Default False, show/not the tooltip when mouse mover leave a HEATMAP point.
 HEATMAPMouseLeaveColor
 Color when mouse leaving the element
 HEATMAPMouseLeaveOpacity
 Opacity when mouse leaving the element
 HEATMAPMouseLeaveStrokeColor
 Stroke color when mouse leaving the element
 HEATMAPMouseLeaveStrokeWidth
 Stroke width when mouse leaving the element
 HEATMAPMouseMoveDisplay
 Default False, show/not the tooltip when mouse move into a HEATMAP point.

HEATMAPMouseMoveColor
Color when mouse moving in the element

HEATMAPMouseMoveOpacity
Opacity when mouse moving in the element

HEATMAPMouseMoveStrokeColor
Stroke color when mouse moving in the element

HEATMAPMouseMoveStrokeWidth
Stroke width when mouse moving in the element

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

BUBBLEMouseOutAnimationTime
Animation time when mouse moving out the element

BUBBLEMouseOutColor
Color when mouse moving out the element

BUBBLEMouseOutOpacity
Opacity when mouse moving out the element

BUBBLEMouseOutStrokeColor
Stroke color when mouse moving out the element

BUBBLEMouseOutStrokeWidth
Stroke width when mouse moving out the element

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

BUBBLEMouseUpColor
Color when mouse moving up the element

BUBBLEMouseUpOpacity
Opacity when mouse moving up the element

BUBBLEMouseUpStrokeColor
Stroke color when mouse moving up the element

BUBBLEMouseUpStrokeWidth
Stroke width when mouse moving up the element

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

BUBBLEMouseOverColor
Color when mouse moving over the element

BUBBLEMouseOverOpacity
Opacity when mouse moving over the element

BUBBLEMouseOverStrokeColor
Stroke color when mouse moving over the element

BUBBLEMouseOverStrokeWidth
Stroke width when mouse moving over the element

BUBBLEMouseOverTooltipsSetting
 Default "style1"
 BUBBLEMouseOverTooltipsHtml
 Default " "
 BUBBLEMouseOverTooltipsPosition
 Default "absolute"
 BUBBLEMouseOverTooltipsBackgroundColor
 Default "white"
 BUBBLEMouseOverTooltipsBorderStyle
 Default "solid"
 BUBBLEMouseOverTooltipsBorderWidth
 Default 0
 BUBBLEMouseOverTooltipsPadding
 Default "3px"
 BUBBLEMouseOverTooltipsBorderRadius
 Default "3px"
 BUBBLEMouseOverTooltipsOpacity
 Default 0.8
 SNPxlink Default False, add/not xlink for SNP module
 SNPMouseEvent Default True, open/not open mouse event of SNP module
 SNPMouseCombinationEvent
 Default False, open/not COMBINATION module for SNP module
 SNPMouseCombinationImageDisplay
 Default False, open/not image display in COMBINATION module for SNP
 module
 SNPMouseCombinationImageTitle
 Title of the image
 SNPMouseCombinationImageTitleSize, SNPMouseCombinationImageTitleWeight, SNPMouseCombinationImageTitleColor
 Size, weight and color of the title
 SNPMouseCombinationImagePositionX, SNPMouseCombinationImagePositionY
 Coordinates for image
 SNPMouseCombinationImageHeight, SNPMouseCombinationImageWidth
 Height and width of image
 SNPMouseCombinationGraphDisplay
 Default False, open/not graph display in COMBINATION module for SNP module
 SNPMouseCombinationGraphTitle
 Title of the graph
 SNPMouseCombinationGraphTitleSize, SNPMouseCombinationGraphTitleWeight, SNPMouseCombinationGraphTitleColor
 Size, weight and color of the title
 SNPMouseCombinationGraphType
 Type of graph
 SNPMouseCombinationGraphPositionX, SNPMouseCombinationGraphPositionY
 Coordinates for graph
 SNPMouseCombinationGraphHeight, SNPMouseCombinationGraphWidth
 Height and width for graph
 SNPMouseCombinationGraphHistogramBarColor
 Bar color of histogram graph

SNPMouseCombinationGraphHistogramPadding
 Padding between bar of histogram graph

SNPMouseCombinationGraphHistogramPositionCorrectX
 Correction distance of X axis in histogram

SNPMouseCombinationGraphPieAutoColor
 Whether use auto color for pie graph or not

SNPMouseCombinationGraphPieColor
 Color for pie graph if auto color is false

SNPMouseCombinationGraphPieSize
 Size of pie graph

SNPMouseCombinationGraphPieStroke
 Whether each pie has a stroke or not

SNPMouseCombinationGraphPieStrokeColor, SNPMouseCombinationGraphPieStrokeWidth
 The stroke color and width for pie graph

SNPMouseCombinationGraphPieOpacity
 Opacity for pie graph

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

SNPMouseCombinationGraphLinePoint
 Whether display the broken point in line graph

SNPMouseCombinationGraphLinePointSize
 Size of broken point

SNPMouseCombinationGraphLinePointAutoColor
 Whether display the broken point in auto color

SNPMouseCombinationGraphLinePointColor
 Color for broken point if auto color is false

SNPMouseCombinationGraphLinePointStroke
 Whether display the broken point stroke

SNPMouseCombinationGraphLinePointStrokeColor, SNPMouseCombinationGraphLinePointStrokeWidth
 The stroke color and width for broken point

SNPMouseCombinationGraphLinePointOpacity
 Opacity for broken line

SNPMouseCombinationGraphLinePositionCorrectX
 Correction distance of X axis for line

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

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

SNPMouseCombinationTextPositionCorrectX, SNPMouseCombinationTextPositionCorrectY
 The coordinates for text

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

SNPMouseClickColor
 Color after clicking the element

SNPMouseClickCircleSize
 Circle size after clicking the element

SNPMouseClickCircleOpacity
 Opacity after clicking the element

SNPMouseClickCircleStrokeColor
Stroke color after clicking the element

SNPMouseClickCircleStrokeWidth
Stroke width after clicking the element

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

SNPMouseClickTextOpacity
Text opacity after clicking the element

SNPMouseClickTextColor
Text color after clicking the element

SNPMouseClickTextSize
Text size after clicking the element

SNPMouseClickTextPostionX, SNPMouseClickTextPostionY
Text coordinate after clicking the element

SNPMouseClickTextDrag
Whether text is draggable for element

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

SNPMouseDownColor
Color after mouse moving down the element

SNPMouseDownCircleSize
Circle size after mouse moving down the element

SNPMouseDownCircleOpacity
Circle opacity after mouse moving down the element

SNPMouseDownCircleStrokeColor
Circle stroke color after mouse moving down the element

SNPMouseDownCircleStrokeWidth
Circle stroke width after mouse moving down the element

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

SNPMouseEnterColor
Color after mouse entering enter the element

SNPMouseEnterCircleSize
Circle size after mouse entering the element

SNPMouseEnterCircleOpacity
Circle opacity after mouse entering the element

SNPMouseEnterCircleStrokeColor
Circle stroke color after mouse entering the element

SNPMouseEnterCircleStrokeWidth
Circle stroke width after mouse entering the element

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

SNPMouseLeaveColor
Color after mouse leaving the element

SNPMouseLeaveCircleSize
Circle size after mouse leaving the element

SNPMouseLeaveCircleOpacity
Circle opacity after mouse leaving the element

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

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

LINKMouseEnterStrokeWidth
 Stroke width when mouse entering the element
 LINKMouseLeaveDisplay
 Default False, show/not the tooltip when mouse mover leave a LINK point.
 LINKMouseLeaveOpacity
 Opacity when mouse leaving the element
 LINKMouseLeaveStrokeColor
 Stroke color when mouse leaving the element
 LINKMouseLeaveStrokeWidth
 Stroke width when mouse leaving the element
 LINKMouseMoveDisplay
 Default False, show/not the tooltip when mouse move into a LINK point.
 LINKMouseMoveOpacity
 Opacity when mouse moving in the element
 LINKMouseMoveStrokeColor
 Stroke color when mouse moving in the element
 LINKMouseMoveStrokeWidth
 Stroke width when mouse moving in the element
 LINKMouseOutDisplay
 Defalut False, hide/not tooltip when mouse is not hovering a LINK point any-
 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
 CHORDMouseFillColorExcluded
 A type of color in character, chord in this color will be hided
 CHORDMouseClickedDisplay
 Default False, show/not the tooltip when mouse click on a CHORD point.
 CHORDMouseClickedOpacity
 Opacity when mouse clicking
 CHORDMouseClickedStrokeColor
 Stroke color when mouse clicking
 CHORDMouseClickedStrokeWidth
 Stroke width when mouse clicking
 CHORDMouseDownDisplay
 Default False, show/not the tooltip when mouse click down a CHORD point.
 CHORDMouseDownOpacity
 Opacity when mouse moving down the element
 CHORDMouseDownStrokeColor
 Stroke color when mouse moving down the element
 CHORDMouseDownStrokeWidth
 Stroke width when mouse moving down the element
 CHORDMouseEnterDisplay
 Default False, show/not the tooltip when mouse mover over a CHORD point.
 CHORDMouseEnterOpacity
 Opacity when mouse entering the element
 CHORDMouseEnterStrokeColor
 Stroke color when mouse entering the element
 CHORDMouseEnterStrokeWidth
 Stroke width when mouse entering the element
 CHORDMouseLeaveDisplay
 Default False, show/not the tooltip when mouse mover leave a CHORD point.
 CHORDMouseLeaveOpacity
 Opacity when mouse leaving the element

CHORDMouseLeaveStrokeColor
 Stroke color when mouse leaving the element
 CHORDMouseLeaveStrokeWidth
 Stroke width when mouse leaving the element
 CHORDMouseMoveDisplay
 Default False, show/not the tooltip when mouse move into a CHORD point.
 CHORDMouseMoveOpacity
 Opacity when mouse moving in the element
 CHORDMouseMoveStrokeColor
 Stroke color when mouse moving in the element
 CHORDMouseMoveStrokeWidth
 Stroke width when mouse moving in the element
 CHORDMouseOutDisplay
 Default 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

HISTOGRAMMouseClickStrokeColor
Stroke color when mouse clicking

HISTOGRAMMouseClickStrokeWidth
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
Default 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

WIGMouseClickedFillColor
 Filling color when mouse clicking the element
 WIGMouseDownDisplay
 Default False, show/not the tooltip when mouse click down a WIG point.
 WIGMouseDownLineOpacity
 Line opacity when mouse moving down the element
 WIGMouseDownLineStrokeColor
 Stroke color when mouse moving down the element
 WIGMouseDownLineStrokeWidth
 Stroke width when mouse moving down the element
 WIGMouseDownFillColor
 Filling color when mouse moving down the element
 WIGMouseEnterDisplay
 Default False, show/not the tooltip when mouse mover over a WIG point.
 WIGMouseEnterLineOpacity
 Line opacity when mouse entering the element
 WIGMouseEnterLineStrokeColor
 Stroke color when mouse entering the element
 WIGMouseEnterLineStrokeWidth
 Stroke width when mouse entering the element
 WIGMouseEnterFillColor
 Filling color when mouse entering the element
 WIGMouseLeaveDisplay
 Default False, show/not the tooltip when mouse mover leave a WIG point.
 WIGMouseLeavelineOpacity
 Line opacity when mouse leaving the element
 WIGMouseLeavelineStrokeColor
 Stroke color when mouse leaving the element
 WIGMouseLeavelineStrokeWidth
 Stroke width when mouse leaving the element
 WIGMouseLeaveFillColor
 Filling color when mouse leaving the element
 WIGMouseMoveDisplay
 Default False, show/not the tooltip when mouse move into a WIG point.
 WIGMouseMoveLineOpacity
 Line opacity when mouse moving in the element
 WIGMouseMoveLineStrokeColor
 Stroke color when mouse moving in the element
 WIGMouseMoveLineStrokeWidth
 Stroke width when mouse moving in the element
 WIGMouseMoveFillColor
 Filling color when mouse leaving the element
 WIGMouseOutDisplay
 Defalut False, hide/not tooltip when mouse is not hovering a WIG point any-
 more.
 WIGMouseOutAnimationTime
 Animation time when mouse moving out the element
 WIGMouseOutLineOpacity
 Line opacity when mouse moving out the element

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

SCATTERMouseClickedColor
 Color when mouse clicking the element
 SCATTERMouseClickedCircleSize
 Circle size when mouse clicking the element
 SCATTERMouseClickedCircleOpacity
 Circle opacity when mouse clicking the element
 SCATTERMouseClickedCircleStrokeColor
 Circle stroke color when mouse clicking the element
 SCATTERMouseClickedCircleStrokeWidth
 Circle stroke width when mouse clicking the element
 SCATTERMouseClickedTextFromData
 Text column when mouse clicking the element
 SCATTERMouseClickedTextOpacity
 Text opacity when mouse clicking the element
 SCATTERMouseClickedTextColor
 Text color when mouse clicking the element
 SCATTERMouseClickedTextSize
 Text size when mouse clicking the element
 SCATTERMouseClickedTextPostionX, SCATTERMouseClickedTextPostionY
 Text coordinates when mouse clicking the element
 SCATTERMouseClickedTextDrag
 Whether text is draggable when clicing element
 SCATTERMouseDownDisplay
 Default False, show/not the tooltip when mouse click down a SCATTER point.
 SCATTERMouseDownColor
 Color when mouse moving down the element
 SCATTERMouseDownCircleSize
 Circle size when mouse moving down the element
 SCATTERMouseDownCircleOpacity
 Circle opacity when mouse moving down the element
 SCATTERMouseDownCircleStrokeColor
 Circle stroke color when mouse moving down the element
 SCATTERMouseDownCircleStrokeWidth
 Circle stroke width when mouse moving down the element
 SCATTERMouseEnterDisplay
 Default False, show/not the tooltip when mouse mover over a SCATTER point.
 SCATTERMouseEnterColor
 Color when mouse entering the element
 SCATTERMouseEnterCircleSize
 Circle size when mouse entering the element
 SCATTERMouseEnterCircleOpacity
 Circle opacity when mouse entering the element
 SCATTERMouseEnterCircleStrokeColor
 Circle stroke color when mouse entering the element
 SCATTERMouseEnterCircleStrokeWidth
 Circle stroke width when mouse entering the element
 SCATTERMouseLeaveDisplay
 Default False, show/not the tooltip when mouse mover leave a SCATTER point.

SCATTERMouseLeaveColor
Color when mouse leaving the element

SCATTERMouseLeaveCircleSize
Circle size when mouse leaving the element

SCATTERMouseLeaveCircleOpacity
Circle opacity when mouse leaving the element

SCATTERMouseLeaveCircleStrokeColor
Circle stroke color when mouse leaving the element

SCATTERMouseLeaveCircleStrokeWidth
Circle stroke width when mouse leaving the element

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

SCATTERMouseMoveColor
Color when mouse moving in the element

SCATTERMouseMoveCircleSize
Circle size when mouse moving in the element

SCATTERMouseMoveCircleOpacity
Circle opacity when mouse moving in the element

SCATTERMouseMoveCircleStrokeColor
Circle stroke color when mouse moving in the element

SCATTERMouseMoveCircleStrokeWidth
Circle stroke width when mouse moving in the element

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

SCATTERMouseOutAnimationTime
Animation time when mouse moving out the element

SCATTERMouseOutColor
Color when mouse moving out the element

SCATTERMouseOutCircleSize
Circle size when mouse moving out the element

SCATTERMouseOutCircleOpacity
Circle opacity when mouse moving out the element

SCATTERMouseOutCircleStrokeColor
Circle stroke color when mouse moving out the element

SCATTERMouseOutCircleStrokeWidth
Circle stroke width when mouse moving out the element

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

SCATTERMouseUpColor
Color when mouse moving up the element

SCATTERMouseUpCircleSize
Circle size when mouse moving up the element

SCATTERMouseUpCircleOpacity
Circle opacity when mouse moving up the element

SCATTERMouseUpCircleStrokeColor
Circle stroke color when mouse moving up the element

SCATTERMouseUpCircleStrokeWidth	Circle stroke width when mouse moving up the element
SCATTERMouseOverDisplay	Default False, show/not the tooltip when mouse hover on a SCATTER point.
SCATTERMouseOverColor	Color when mouse moving over the element
SCATTERMouseOverCircleSize	Circle size when mouse moving over the element
SCATTERMouseOverCircleOpacity	Circle opacity when mouse moving over the element
SCATTERMouseOverCircleStrokeColor	Circle stroke color when mouse moving over the element
SCATTERMouseOverCircleStrokeWidth	Circle stroke width when mouse moving over the element
SCATTERMouseOverTooltipsSetting	Default "style1"
SCATTERMouseOverTooltipsHtml	Default " "
SCATTERMouseOverTooltipsPosition	Default "absolute"
SCATTERMouseOverTooltipsBackgroundColor	Default "white"
SCATTERMouseOverTooltipsBorderStyle	Default "solid"
SCATTERMouseOverTooltipsBorderWidth	Default 0
SCATTERMouseOverTooltipsPadding	Default "3px"
SCATTERMouseOverTooltipsBorderRadius	Default "3px"
SCATTERMouseOverTooltipsOpacity	Default 0.8
ARCxlink	Default False, add/not xlink for ARC module
ARCMouseEvent	Default True, open/not open mouse event of ARC module
ARCMouseClickDisplay	Default False, show/not the tooltip when mouse click on a ARC point.
ARCMouseClickColor	Color when mouse clicking the element
ARCMouseClickArcOpacity	Arc opacity when mouse clicking the element
ARCMouseClickArcStrokeColor	Arc stroke color when mouse clicking the element
ARCMouseClickArcStrokeWidth	Arc stroke width when mouse clicking the element
ARCMouseClickTextFromData	Text column when mouse clicking the element
ARCMouseClickTextOpacity	Text opacity when mouse clicking the element

ARCMouseClickTextColor
Text color when mouse clicking the element

ARCMouseClickTextSize
Text size when mouse clicking the element

ARCMouseClickTextPostionX, ARCMouseClickTextPostionY
Text coordinates when mouse clicking the element

ARCMouseClickTextDrag
Whether text is draggable when mouse clicking the element

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

ARCMouseDownColor
Color when mouse moving down the element

ARCMouseDownArcOpacity
Arc opacity when mouse moving down the element

ARCMouseDownArcStrokeColor
Arc stroke color when mouse moving down the element

ARCMouseDownArcStrokeWidth
Arc stroke width when mouse moving down the element

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

ARCMouseEnterColor
Color when mouse entering the element

ARCMouseEnterArcOpacity
Arc opacity when mouse entering the element

ARCMouseEnterArcStrokeColor
Arc stroke color when mouse entering the element

ARCMouseEnterArcStrokeWidth
Arc stroke width when mouse entering the element

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

ARCMouseLeaveColor
Color when mouse leaving the element

ARCMouseLeaveArcOpacity
Arc opacity when mouse leaving the element

ARCMouseLeaveArcStrokeColor
Arc stroke color when mouse leaving the element

ARCMouseLeaveArcStrokeWidth
Arc stroke width when mouse leaving the element

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

ARCMouseMoveColor
Color when mouse moving in the element

ARCMouseMoveArcOpacity
Arc opacity when mouse moving in the element

ARCMouseMoveArcStrokeColor
Arc stroke color when mouse moving in the element

ARCMouseMoveArcStrokeWidth
Arc stroke width when mouse moving in the element

ARCMouseOutDisplay
 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
Default False, hide/not tooltip when mouse is not hovering a GENE point anymore.

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

Examples

```
rNGCircos(genome = "hg19")
```

rNGCircos-shiny	<i>Shiny bindings for rNGCircos</i>
-----------------	-------------------------------------

Description

Output and render functions for using rNGCircos within Shiny applications and interactive Rmd documents.

Usage

```
rNGCircosOutput(outputId, width = "100%", height = "100%")
renderNGCircos(expr, env = parent.frame(), quoted = FALSE)
```

Arguments

outputId	output variable to read from
width, height	Must be a valid CSS unit (like '100%', '400px', 'auto') or a number, which will be coerced to a string and have 'px' appended.
expr	An expression that generates a rNGCircos
env	The environment in which to evaluate expr.
quoted	Is expr a quoted expression (with quote())? This is useful if you want to save an expression in a variable.

rNGCircosArc

*Create a ARC module to a moduleList***Description**

Display the CNV without value, Gene domain, Chromosome band in the visualization

Usage

```
rNGCircosArc(
  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

Examples

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

rNGCircosAuxLine

Create a AUXILIAYLINE module to a moduleList

Description

A auxiliary line displayed in the visualization

Usage

```
rNGCircosAuxLine(
  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

Examples

```
rNGCircos(rNGCircosAuxLine('AuxLine01'))
```

rNGCircosBackground	Create a <i>BACKGROUND</i> module to be added to a <i>moduleList</i>
---------------------	--

Description

Simple background to display behind another module

Usage

```

rNGCircosBackground(
  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 color of the background element, in hexadecimal RGB format.

borderColors The color of the background borders, in hexadecimal RGB format.
axisShow Whether show a axis or not
axisWidth, axisColor, axisOpacity, axisNum
 The color, opacity value and number of line for axis
minRadius, maxRadius
 Where the module should begin and end
borderSize The thickness of the background borders.
animationDisplay
 Whether display a animation or not
animationTime, animationDelay, animationType
 The time, delay and display type for animation
... Ignored

Examples

```
rNGCircos(rNGCircosBackground('bg01', fillColors="#FFEEEE", borderSize = 1))
```

rNGCircosBubble	Create a BUBBLE module to a moduleList
-----------------	--

Description

A bubble plot displayed in the visualization

Usage

```
rNGCircosBubble(  
  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	Where the module should begin and end.
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 with min value
maxColor	The color the bubble with 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

Examples

```

bubbleData<-bubbleExample
rNGCircos(rNGCircosBubble('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),
BUBBLEMouseOverDisplay =TRUE,innerRadius = 236)

```

rNGCircosChord

Create a *CHORD* module to a moduleList

Description

Display a chord module using a data matrix.

Usage

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

Arguments

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

Examples

```
chordData<-chordExample
rNGCircos(rNGCircosChord('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"=
"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"=6.1,
"Verrucomicrobia"=8.3,"Ascomycota"=159.41,"Basidiomycota"=79.73,"Zygomycota"=139.29 ),outerRadius = 217,
genomeLabelDisplay = FALSE)
```

rNGCircosCnv

Create a CNV module to a moduleList

Description

A copy number variance module displayed in the visualization

Usage

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

Arguments

modulename	The name of the new module.
compareGroup	The group number of this module in compare module
maxRadius, minRadius	Where the module should begin and end.
width	Width for CNV module
color	Color for CNV module
ValueAxisManualScale	Whether manually control the scale of value
ValueAxisMaxScale, ValueAxisMinScale	The max and min scale value for manually control

```
strokeColor, strokeWidth
    The color and width for stroke
opacity
    The opacity for module
animationDisplay
    Whether display animation
animationTime, animationDelay, animationType
    The time, delay and display type for animation
data
    A list of CNV with details including start, end, value, link, color and html.
    Details can be found on document.
...
    Ignored
```

Examples

```
cnvData<-cnvExample
rNGCircos(rNGCircosCnv('Cnv01',maxRadius=175, minRadius=116, data=cnvData,width=2,color="#4876FF")+
rNGCircosBackground("bg01",minRadius=116,maxRadius=175,fillColors="#F2F2F2",axisShow=TRUE),CNVMouseOv
```

rNGCircosGene

Create a GENE module to a moduleList

Description

A number of genes with different functional region displayed in the visualization

Usage

```
rNGCircosGene(
  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

Examples

```
geneData<-geneExample
rNGCircos(rNGCircosGene('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)
```

rNGCircosHeatmap	<i>Create a HEATMAP module to a moduleList</i>
------------------	--

Description

A heatmap plot displayed in the visualization

Usage

```
rNGCircosHeatmap(
  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 with min value
maxColor	The color for heatmap with 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

Examples

```

heatmapData<-heatmapExample
rNGCircos(rNGCircosHeatmap('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)

```

rNGCircosHistogram	Create a <i>HISTOGRAM</i> module to a moduleList
--------------------	--

Description

Display a multi-layer histogram in circos

Usage

```
rNGCircosHistogram(
  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

Examples

```
histogramData<-histogramExample
rNGCircos(rNGCircosHistogram('HISTOGRAM01', data = histogramData,fillColor= "#ff7f0e",maxRadius = 210,
```

```
minRadius = 175),genome=list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"= 27905053,"X"=22422827,"4"=1351
outerRadius = 220)
```

rNGCircosLegend

Create a *LEGEND* module to a moduleList

Description

Simple legend annotation displayed in the visualization.

Usage

```
rNGCircosLegend(
  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	Coordinates of the lower left corner of the annotation
title	The title for legend
size	Font size for title, with units specified (such as em or px).
weight	Font weight for title. Can be "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

Examples

```
legend1 <- list(type= "circle", color="#1E77B4",opacity="1.0",circleSize="8",text= "C.CK", textSize= "14",tex
legend2 <- list(type= "circle", color="#AEC7E8",opacity="1.0",circleSize="8",text= "C.NPK", textSize= "14",te
rNGCircos(rNGCircosLegend('legend01', title = "legend",data=list(legend1,legend2),size = 20))
```

rNGCircosLine	Create a <i>LINE</i> module to a moduleList
---------------	---

Description

Display a multi-layer line plot in circos

Usage

```
rNGCircosLine(
  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

Examples

```
lineData<-lineExample
rNGCircos(rNGCircosLine('LINE01', data = lineData,maxRadius=200,minRadius=150,color= "#ff0031")+
rNGCircosBackground('BG01',minRadius = 205,maxRadius = 150))
```

rNGCircosLink	<i>Create a LINK module to a moduleList</i>
---------------	---

Description

Link two specific region in genome.

Usage

```
rNGCircosLink(
  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

Examples

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

rNGCircosLollipop	Create a LOLLIPOP module to a moduleList
-------------------	--

Description

Display a lollipop plot in the visualization

Usage

```
rNGCircosLollipop(
  modulename,
  compareGroup = 1,
  fillColor = "#9400D3",
  secondColor = "#FFFFFF",
  pointType = "circle",
  circleSize = 2,
  diamondWidth = 10,
  diamondHeight = 5,
  rectWidth = 2,
```

```

    rectHeight = 2,
    stroke = TRUE,
    strokeColor = "#000000",
    strokeWidth = 0.5,
    lineAutoHeight = TRUE,
    lineAutoMaximumHeightZoomRate = 1,
    lineHeightRate = 0.75,
    lineWidth = 2,
    lineColor = "#000000",
    realStart = 0,
    ValueAxisManualScale = FALSE,
    ValueAxisMaxScale = 10,
    ValueAxisMinScale = 0,
    animationDisplay = FALSE,
    animationTime = 2000,
    animationDelay = 20,
    animationType = "bounce",
    data,
    ...
)

```

Arguments

<code>modulename</code>	The name of the new module.
<code>compareGroup</code>	The group number of this module in compare module
<code>fillColor</code>	Filling color for lollipop
<code>secondColor</code>	Second filling color for heterogeneous lollipop
<code>pointType</code>	The type for lollipop, could be circle, rect and diamond
<code>circleSize</code>	If circle, the size for lollipop
<code>diamondWidth, diamondHeight</code>	If diamond, the width and height for lollipop
<code>rectWidth, rectHeight</code>	If rect, the width and height for lollipop
<code>stroke</code>	Whether display the stroke for lollipop
<code>strokeColor, strokeWidth</code>	The color and width for stroke
<code>lineAutoHeight</code>	Whether auto assign the height for each lollipop
<code>lineAutoMaximumHeightZoomRate</code>	If auto assign, the zoom rate for each lollipop
<code>lineHeightRate</code>	If manually assign, the rate of lollipop compared to real value
<code>lineWidth, lineColor</code>	The width and color for the line of lollipop
<code>realStart</code>	The real start position for data in genome.
<code>ValueAxisManualScale</code>	Whether manually control the scale of value
<code>ValueAxisMaxScale, ValueAxisMinScale</code>	The max and min scale value for manually control
<code>animationDisplay</code>	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

Examples

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

rNGCircosModuleList *Create a list of modules*

Description

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

Usage

```
rNGCircosModuleList()

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

## S3 method for class 'rNGCircosModuleList'
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).

rNGCircosScatter *Create a SCATTER module to a moduleList*

Description

Display a point plot in circos

Usage

```

rNGCircosScatter(
  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

<code>modulename</code>	The name of the new module.
<code>compareGroup</code>	The group number of this module in compare module
<code>radius</code>	Radius of scatter circle
<code>innerCircleSize, outerCircleSize</code>	If circle, inner and outer circle size
<code>innerCircleColor, outerCircleColor</code>	If circle, inner and outer circle color
<code>innerPointType, outerPointType</code>	The type for inner and outer point, could be circle or rect
<code>innerrectWidth, innerrectHeight</code>	If rect, inner width and height
<code>outerrectWidth, outerrectHeight</code>	If rect, inner width and height
<code>outerCircleOpacity</code>	If circle, the opacity for outer circle
<code>random_data</code>	Scatter position fluctuation
<code>animationDisplay</code>	Whether display animation
<code>animationInitialPositionX, animationInitialPositionY</code>	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

Examples

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

rNGCircosSnp

Create a module with SNPs to be added to a moduleList

Description

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

Usage

```
rNGCircosSnp(
  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

Examples

```
snpData<-snpExample
rNGCircos(rNGCircosSnp('SNP01', minRadius =150, maxRadius = 190, data = snpExample,fillColor= "#9ACD32",
  circleSize= 2, SNPAnimationDisplay=TRUE,SNPAnimationTime= 2000,SNPAnimationDelay= 0, SNPAnimationType= "li
  rNGCircosBackground('BG01',minRadius = 145, maxRadius = 200))
```

rNGCircosText

Create Text module to be added to a moduleList

Description

Simple text annotation displayed in the visualization

Usage

```

rNGCircosText(
  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

<code>modulename</code>	The name of the new module.
<code>text</code>	The text to be displayed.
<code>x, y</code>	Coordinates of the lower left corner of the annotation
<code>size</code>	Font size, with units specified (such as em or px).
<code>weight</code>	Font weight. Can be "normal", "bold", "bolder" or "lighter".
<code>opacity</code>	Font opacity.
<code>color</code>	Font color, in hexadecimal RGB format.
<code>rotateRate</code>	rotate rate for text
<code>animationDisplay</code>	Whether display a animation or not
<code>animationInitialSize</code>	Initial text size in animation
<code>animationInitialWeight</code>	Initial text weight in animation
<code>animationInitialColor</code>	Initial text color in animation
<code>animationInitialOpacity</code>	Initial text opacity in animation
<code>animationInitialPositionX, animationInitialPositionY</code>	Initial text coordinates in animation(The parameter x,y will become the final position for text if animation displayed)
<code>animationInitialRotate</code>	Initial rotate rate in animation

```

animationTime, animationDelay, animationType
    The time, delay and display type for animation
...
    Ignored

```

Examples

```
rNGCircos(rNGCircosText('text01', 'Annotation', color = '#DD2222', x = -40))
```

rNGCircosWig	<i>Create a WIG module to a moduleList</i>
--------------	--

Description

Display a multi-layer line plot in circos

Usage

```

rNGCircosWig(
  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

Examples

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

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

Description

The data is in matrix with row 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 row 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 row 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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