

Package ‘interacCircos’

December 18, 2020

Type Package

Title A R package for visualization of interactive Circos plot

Description The interacCircos package is inspired by circosJS, BioCircos.js and NG-Circos. We integrate the modules of circosJS, BioCircos.js and NG-Circos into this R package, based on htmlwidgets framework.

Version 1.0.0

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License GPL-3

Encoding UTF-8

LazyData true

Depends R (>= 3.5.0)

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 column names

Usage

```
arcExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

color color

des description

link hyperlink

html The external html language

bubbleExample	<i>Bubble plot example data</i>
---------------	---------------------------------

Description

The data is in matrix with column names

Usage

```
bubbleExample
```

Format

A data frame with 8 columns:

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

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

Description

The data is in matrix with column names

Usage

```
chord.pExample
```

Format

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

source_chr chromosome name of source
source_start start position of source
source_end end position of source
target_chr chromosome name of target
target_start start position of target
target_end end position of target

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

Description

The data is in matrix with column names

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

Circos	<i>interacCircos</i>
--------	----------------------

Description

A R packages for visualization of interactive Circos plot

Usage

```
Circos(
  moduleList = CircosModuleList(),
  genome = "hg19",
  genome2 = "hg19",
  genomeFillColor = "Spectral",
  chrPad = 0.02,
  width = NULL,
  height = NULL,
  innerRadius = 216,
  outerRadius = 240,
  svgClassName = "interacCircos",
  displayGenomeBorder = TRUE,
  genomeBorderColor = "#000",
  genomeBorderSize = 0.5,
  genomeTicksDisplay = FALSE,
  genomeTicksLen = 5,
  genomeTicksColor = "#000",
  genomeTicksTextSize = "0.6em",
  genomeTicksRealLength = TRUE,
  genomeTicksTextColor = "#000",
  genomeTicksScale = 3e+07,
  genomeTicksOffset = 0,
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genomeLabelDisplay = TRUE,  
genomeLabelTextSize = "10pt",  
genomeLabelTextColor = "#000",  
genomeLabelDx = 0,  
genomeLabelDy = 0,  
compareEvent = FALSE,  
compareEventGroupGapRate = 0.1,  
compareEventGroupDistance = 0,  
zoom = TRUE,  
TEXTModuleDragEvent = FALSE,  
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CNVMouseEvent = TRUE,  
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```

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HEATMAPMouseEnterStrokeWidth = "none",  
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HEATMAPMouseMoveStrokeColor = "none",  
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HEATMAPMouseOutStrokeColor = "none",  
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HEATMAPMouseOverStrokeWidth = "none",
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HEATMAPMouseOverTooltipsPosition = "absolute",
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HEATMAPMouseOverTooltipsBorderStyle = "solid",
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BUBBLEMouseOutOpacity = 1,
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BUBBLEMouseOutStrokeWidth = "none",
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BUBBLEMouseUpOpacity = 1,
```

```

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BUBBLEMouseOverTooltipsPosition = "absolute",
BUBBLEMouseOverTooltipsBackgroundColor = "white",
BUBBLEMouseOverTooltipsBorderStyle = "solid",
BUBBLEMouseOverTooltipsBorderWidth = 0,
BUBBLEMouseOverTooltipsPadding = "3px",
BUBBLEMouseOverTooltipsBorderRadius = "3px",
BUBBLEMouseOverTooltipsOpacity = 0.8,
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SNPMouseCombinationEvent = FALSE,
SNPMouseCombinationImageDisplay = FALSE,
SNPMouseCombinationImageTitle = "This is image",
SNPMouseCombinationImageTitleSize = 5,
SNPMouseCombinationImageTitleWeight = "bold",
SNPMouseCombinationImageTitleColor = "black",
SNPMouseCombinationImagePositionX = 0,
SNPMouseCombinationImagePositionY = 0,
SNPMouseCombinationImageHeight = 200,
SNPMouseCombinationImageWidth = 300,
SNPMouseCombinationGraphDisplay = FALSE,
SNPMouseCombinationGraphTitle = "This is graph",
SNPMouseCombinationGraphTitleSize = 5,
SNPMouseCombinationGraphTitleWeight = "bold",
SNPMouseCombinationGraphTitleColor = "black",
SNPMouseCombinationGraphType = "histogram",
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SNPMouseCombinationGraphHistogramPadding = 30,
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SNPMouseCombinationGraphPieAutoColor = TRUE,
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SNPMouseCombinationGraphPieSize = 50,
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SNPMouseCombinationGraphPieStrokeWidth = 1,
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SNPMouseCombinationGraphLineType = "linear",
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SNPMouseCombinationGraphLineWidth = 1,
SNPMouseCombinationGraphLinePoint = FALSE,

```



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SNPMouseCombinationGraphLinePointSize = 5,  
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SNPMouseCombinationGraphLinePointColor = c("blue", "orange"),  
SNPMouseCombinationGraphLinePointStroke = TRUE,  
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SNPMouseClickCircleSize = 4,  
SNPMouseClickCircleOpacity = 1,  
SNPMouseClickCircleStrokeColor = "#F26223",  
SNPMouseClickCircleStrokeWidth = 0,  
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SNPMouseClickTextSize = 8,  
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SNPMouseClickTextPostionY = 10,  
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SNPMouseDownCircleStrokeColor = "#F26223",  
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```

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SNPMouseOutCircleOpacity = 1,  
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SNPMouseOverTooltipsBackgroundColor = "white",  
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LINKMouseClickDisplay = FALSE,  
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LINKMouseDownStrokeWidth = "none",  
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LINKMouseEnterStrokeColor = "none",  
LINKMouseEnterStrokeWidth = "none",  
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LINKMouseMoveStrokeColor = "none",  
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LINKMouseOutOpacity = 1,
```

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LINKLabelDragEvent = FALSE,
CHORDMouseEvent = TRUE,
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HISTOGRAMMouseEvent = TRUE,
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WIGMouseOverTooltipsBorderRadius = "3px",
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SCATTERMouseClickedDisplay = FALSE,
SCATTERMouseClickedColor = "red",
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SCATTERMouseClickedCircleOpacity = 1,
SCATTERMouseClickedCircleStrokeColor = "none",
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SCATTERMouseClickedTextOpacity = 1,
SCATTERMouseClickedTextColor = "red",
SCATTERMouseClickedTextSize = 8,
SCATTERMouseClickedTextPositionX = 1,
SCATTERMouseClickedTextPositionY = 10,
SCATTERMouseClickedTextDrag = TRUE,
SCATTERMouseDownDisplay = FALSE,
SCATTERMouseDownColor = "red",
SCATTERMouseDownCircleSize = 2,
SCATTERMouseDownCircleOpacity = 1,
SCATTERMouseDownCircleStrokeColor = "none",
SCATTERMouseDownCircleStrokeWidth = "none",
SCATTERMouseEnterDisplay = FALSE,
SCATTERMouseEnterColor = "red",
SCATTERMouseEnterCircleSize = 2,
SCATTERMouseEnterCircleOpacity = 1,
SCATTERMouseEnterCircleStrokeColor = "none",
SCATTERMouseEnterCircleStrokeWidth = "none",
SCATTERMouseLeaveDisplay = FALSE,
SCATTERMouseLeaveColor = "red",
SCATTERMouseLeaveCircleSize = 2,
SCATTERMouseLeaveCircleOpacity = 1,
SCATTERMouseLeaveCircleStrokeColor = "none",
SCATTERMouseLeaveCircleStrokeWidth = "none",
SCATTERMouseMoveDisplay = FALSE,
SCATTERMouseMoveColor = "red",
SCATTERMouseMoveCircleSize = 2,
SCATTERMouseMoveCircleOpacity = 1,
SCATTERMouseMoveCircleStrokeColor = "none",
SCATTERMouseMoveCircleStrokeWidth = "none",
SCATTERMouseOutDisplay = FALSE,
SCATTERMouseOutAnimationTime = 500,
SCATTERMouseOutColor = "red",
SCATTERMouseOutCircleSize = 2,
SCATTERMouseOutCircleOpacity = 1,
SCATTERMouseOutCircleStrokeColor = "none",
SCATTERMouseOutCircleStrokeWidth = "none",
SCATTERMouseUpDisplay = FALSE,
SCATTERMouseUpColor = "red",
SCATTERMouseUpCircleSize = 2,
SCATTERMouseUpCircleOpacity = 1,
SCATTERMouseUpCircleStrokeColor = "none",
SCATTERMouseUpCircleStrokeWidth = "none",
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",
GENMouseLeaveDisplay = FALSE,
GENMouseLeaveColor = "red",
GENMouseLeaveArcOpacity = 1,
GENMouseLeaveArcStrokeColor = "none",
GENMouseLeaveArcStrokeWidth = "none",
GENMouseMoveDisplay = FALSE,
GENMouseMoveColor = "red",
GENMouseMoveArcOpacity = 1,
GENMouseMoveArcStrokeColor = "none",
GENMouseMoveArcStrokeWidth = "none",
GENMouseOutDisplay = FALSE,
GENMouseOutAnimationTime = 500,
GENMouseOutColor = "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,
LOLLIPOPMouseClickDisplay = FALSE,
LOLLIPOPMouseClickColor = "red",
LOLLIPOPMouseClickCircleSize = 2,
LOLLIPOPMouseClickCircleOpacity = 1,
LOLLIPOPMouseClickCircleStrokeColor = "none",
LOLLIPOPMouseClickCircleStrokeWidth = "none",
LOLLIPOPMouseClickTextFromData = "fourth",
LOLLIPOPMouseClickTextOpacity = 1,
LOLLIPOPMouseClickTextColor = "red",
LOLLIPOPMouseClickTextSize = 8,
LOLLIPOPMouseClickTextPostionX = 1,
LOLLIPOPMouseClickTextPostionY = 10,
LOLLIPOPMouseClickTextDrag = 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, genomeTicksTextAlign	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
CNVMouseClickedTextOpacity	Text opacity when mouse clicking the element
CNVMouseClickedTextColor	Text color when mouse clicking the element
CNVMouseClickedTextSize	Text size when mouse clicking the element
CNVMouseClickedTextPostionX, CNVMouseClickedTextPostionY	Text coordinates when mouse clicking the element
CNVMouseClickedTextDrag	Whether text is draggable when mouse clicking the element
CNVMouseDownDisplay	Default False, show/not the tooltip when mouse click down a CNV point.
CNVMouseDownColor	Color when mouse moving down the element

CNVMouseDownArcOpacity	Arc opacity when mouse moving down the element
CNVMouseDownArcStrokeColor	Arc stroke color when mouse moving down the element
CNVMouseDownArcStrokeWidth	Arc stroke width when mouse moving down the element
CNVMouseEnterDisplay	Default False, show/not the tooltip when mouse mover over a CNV point.
CNVMouseEnterColor	Color when mouse entering the element
CNVMouseEnterArcOpacity	Arc opacity when mouse entering the element
CNVMouseEnterArcStrokeColor	Arc stroke color when mouse entering the element
CNVMouseEnterArcStrokeWidth	Arc stroke width when mouse entering the element
CNVMouseLeaveDisplay	Default False, show/not the tooltip when mouse mover leave a CNV point.
CNVMouseLeaveColor	Color when mouse leaving the element
CNVMouseLeaveArcOpacity	Arc opacity when mouse leaving the element
CNVMouseLeaveArcStrokeColor	Arc stroke color when mouse leaving the element
CNVMouseLeaveArcStrokeWidth	Arc stroke width when mouse leaving the element
CNVMouseMoveDisplay	Default False, show/not the tooltip when mouse move into a CNV point.
CNVMouseMoveColor	Color when mouse moving in the element
CNVMouseMoveArcOpacity	Arc opacity when mouse moving in the element
CNVMouseMoveArcStrokeColor	Arc stroke color when mouse moving in the element
CNVMouseMoveArcStrokeWidth	Arc stroke width when mouse moving in the element
CNVMouseOutDisplay	Defalut False, hide/not tooltip when mouse is not hovering a CNV point any-more.
CNVMouseOutAnimationTime	Animation time when mouse moving out the element
CNVMouseOutColor	Color when mouse moving out the element
CNVMouseOutArcOpacity	Arc opacity when mouse moving out the element
CNVMouseOutArcStrokeColor	Arc stroke color when mouse moving out the element
CNVMouseOutArcStrokeWidth	Arc stroke width when mouse moving out the element

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

CNVMouseUpColor
Color when mouse moving up the element

CNVMouseUpArcOpacity
Arc opacity when mouse clicking the element

CNVMouseUpArcStrokeColor
Arc stroke color when mouse clicking the element

CNVMouseUpArcStrokeWidth
Arc stroke width when mouse clicking the element

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

CNVMouseOverColor
Color when mouse moving over the element

CNVMouseOverArcOpacity
Arc opacity when mouse moving over the element

CNVMouseOverArcStrokeColor
Arc stroke color when mouse moving over the element

CNVMouseOverArcStrokeWidth
Arc stroke width when mouse moving over the element

CNVMouseOverTooltipsSetting
Default "style1"

CNVMouseOverTooltipsHtml
Default " "

CNVMouseOverTooltipsPosition
Default "absolute"

CNVMouseOverTooltipsBackgroundColor
Default "white"

CNVMouseOverTooltipsBorderStyle
Default "solid"

CNVMouseOverTooltipsBorderWidth
Default 0

CNVMouseOverTooltipsPadding
Default "3px"

CNVMouseOverTooltipsBorderRadius
Default "3px"

CNVMouseOverTooltipsOpacity
Default 0.8

HEATMAPMouseEvent
Default True, open/not open mouse event of HEATMAP module

HEATMAPMouseClickedDisplay
Default False, show/not the tooltip when mouse click on a HEATMAP point.

HEATMAPMouseClickedColor
Color when mouse clicking

HEATMAPMouseClickedOpacity
Opacity when mouse clicking

HEATMAPMouseClickedStrokeColor
Stroke color when mouse clicking

HEATMAPMouseClickStrokeWidth	Stroke width when mouse clicking
HEATMAPMouseDownDisplay	Default False, show/not the tooltip when mouse click down a HEATMAP point.
HEATMAPMouseDownColor	Color when mouse moving down the element
HEATMAPMouseDownOpacity	Opacity when mouse moving down the element
HEATMAPMouseDownStrokeColor	Stroke color when mouse moving down the element
HEATMAPMouseDownStrokeWidth	Stroke width when mouse moving down the element
HEATMAPMouseEnterDisplay	Default False, show/not the tooltip when mouse mover over a HEATMAP point.
HEATMAPMouseEnterColor	Color when mouse entering the element
HEATMAPMouseEnterOpacity	Opacity when mouse entering the element
HEATMAPMouseEnterStrokeColor	Stroke color when mouse entering the element
HEATMAPMouseEnterStrokeWidth	Stroke width when mouse entering the element
HEATMAPMouseLeaveDisplay	Default False, show/not the tooltip when mouse mover leave a HEATMAP point.
HEATMAPMouseLeaveColor	Color when mouse leaving the element
HEATMAPMouseLeaveOpacity	Opacity when mouse leaving the element
HEATMAPMouseLeaveStrokeColor	Stroke color when mouse leaving the element
HEATMAPMouseLeaveStrokeWidth	Stroke width when mouse leaving the element
HEATMAPMouseMoveDisplay	Default False, show/not the tooltip when mouse move into a HEATMAP point.
HEATMAPMouseMoveColor	Color when mouse moving in the element
HEATMAPMouseMoveOpacity	Opacity when mouse moving in the element
HEATMAPMouseMoveStrokeColor	Stroke color when mouse moving in the element
HEATMAPMouseMoveStrokeWidth	Stroke width when mouse moving in the element
HEATMAPMouseOutDisplay	Defalut False, hide/not tooltip when mouse is not hovering a HEATMAP point anymore.
HEATMAPMouseOutAnimationTime	Animation time when mouse moving out the element

HEATMAPMouseOutColor
Color when mouse moving out the element

HEATMAPMouseOutOpacity
Opacity when mouse moving out the element

HEATMAPMouseOutStrokeColor
Stroke color when mouse moving out the element

HEATMAPMouseOutStrokeWidth
Stroke width when mouse moving out the element

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

HEATMAPMouseUpColor
Color when mouse moving up the element

HEATMAPMouseUpOpacity
Opacity when mouse moving up the element

HEATMAPMouseUpStrokeColor
Stroke color when mouse moving up the element

HEATMAPMouseUpStrokeWidth
Stroke width when mouse moving up the element

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

HEATMAPMouseOverColor
Color when mouse moving over the element

HEATMAPMouseOverOpacity
Opacity when mouse moving over the element

HEATMAPMouseOverStrokeColor
Stroke color when mouse moving over the element

HEATMAPMouseOverStrokeWidth
Stroke width when mouse moving over the element

HEATMAPMouseOverTooltipsSetting
Default "style1"

HEATMAPMouseOverTooltipsHtml
Default " "

HEATMAPMouseOverTooltipsPosition
Default "absolute"

HEATMAPMouseOverTooltipsBackgroundColor
Default "white"

HEATMAPMouseOverTooltipsBorderStyle
Default "solid"

HEATMAPMouseOverTooltipsBorderWidth
Default 0

HEATMAPMouseOverTooltipsPadding
Default "3px"

HEATMAPMouseOverTooltipsBorderRadius
Default "3px"

HEATMAPMouseOverTooltipsOpacity
Default 0.8

BUBBLExlink
Default False, add/not xlink for BUBBLE module

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

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

BUBBLEMouseClickColor
Color when mouse clicking

BUBBLEMouseClickOpacity
Opacity when mouse clicking

BUBBLEMouseClickStrokeColor
Stroke color when mouse clicking

BUBBLEMouseClickStrokeWidth
Stroke width when mouse clicking

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

BUBBLEMouseDownColor
Color when mouse moving down the element

BUBBLEMouseDownOpacity
Opacity when mouse moving down the element

BUBBLEMouseDownStrokeColor
Stroke color when mouse moving down the element

BUBBLEMouseDownStrokeWidth
Stroke width when mouse moving down the element

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

BUBBLEMouseEnterColor
Color when mouse entering the element

BUBBLEMouseEnterOpacity
Opacity when mouse entering the element

BUBBLEMouseEnterStrokeColor
Stroke color when mouse entering the element

BUBBLEMouseEnterStrokeWidth
Stroke width when mouse entering the element

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

BUBBLEMouseLeaveColor
Color when mouse leaving the element

BUBBLEMouseLeaveOpacity
Opacity when mouse leaving the element

BUBBLEMouseLeaveStrokeColor
Stroke color when mouse leaving the element

BUBBLEMouseLeaveStrokeWidth
Stroke width when mouse leaving the element

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

BUBBLEMouseMoveColor
Color when mouse moving in the element

BUBBLEMouseMoveOpacity
Opacity when mouse moving in the element

BUBBLEMouseMoveStrokeColor
Stroke color when mouse moving in the element

BUBBLEMouseMoveStrokeWidth
Stroke width when mouse moving in the element

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

BUBBLEMouseOutAnimationTime
Animation time when mouse moving out the element

BUBBLEMouseOutColor
Color when mouse moving out the element

BUBBLEMouseOutOpacity
Opacity when mouse moving out the element

BUBBLEMouseOutStrokeColor
Stroke color when mouse moving out the element

BUBBLEMouseOutStrokeWidth
Stroke width when mouse moving out the element

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

BUBBLEMouseUpColor
Color when mouse moving up the element

BUBBLEMouseUpOpacity
Opacity when mouse moving up the element

BUBBLEMouseUpStrokeColor
Stroke color when mouse moving up the element

BUBBLEMouseUpStrokeWidth
Stroke width when mouse moving up the element

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

BUBBLEMouseOverColor
Color when mouse moving over the element

BUBBLEMouseOverOpacity
Opacity when mouse moving over the element

BUBBLEMouseOverStrokeColor
Stroke color when mouse moving over the element

BUBBLEMouseOverStrokeWidth
Stroke width when mouse moving over the element

BUBBLEMouseOverTooltipsSetting
Default "style1"

BUBBLEMouseOverTooltipsHtml
Default " "

BUBBLEMouseOverTooltipsPosition
Default "absolute"

BUBBLEMouseOverTooltipsBackgroundColor
Default "white"

BUBBLEMouseOverTooltipsBorderStyle
Default "solid"

BUBBLEMouseOverTooltipsBorderWidth
Default 0

BUBBLEMouseOverTooltipsPadding
Default "3px"

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

SNPMouseCombinationGraphPieOpacity
Opacity for pie graph

SNPMouseCombinationGraphLineType, SNPMouseCombinationGraphLineColor, SNPMouseCombinationGraphLine
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
Default False, hide/not tooltip when mouse is not hovering a LINK point anymore.

LINKMouseOutAnimationTime
Animation time when mouse moving out the element

LINKMouseOutOpacity
Opacity when mouse moving out the element

LINKMouseOutStrokeColor
Stroke color when mouse moving out the element

LINKMouseOutStrokeWidth
Stroke width when mouse moving out the element

LINKMouseUpDisplay
Default False, show/not the tooltip when mouse click up a LINK point.

LINKMouseUpOpacity
Opacity when mouse moving up the element

LINKMouseUpStrokeColor
Stroke color when mouse moving up the element

LINKMouseUpStrokeWidth
Stroke width when mouse moving up the element

LINKMouseOverDisplay
Default False, show/not the tooltip when mouse hover on a LINK point.

LINKMouseOverOpacity
Opacity when mouse moving over the element

LINKMouseOverStrokeColor
Stroke color when mouse moving over the element

LINKMouseOverStrokeWidth
Stroke width when mouse moving over the element

LINKMouseOverTooltipsSetting
Default "style1"

LINKMouseOverTooltipsHtml
Default " "

LINKMouseOverTooltipsPosition
Default "absolute"

LINKMouseOverTooltipsBackgroundColor
Default "white"

LINKMouseOverTooltipsBorderStyle
Default "solid"

LINKMouseOverTooltipsBorderWidth
Default 0

LINKMouseOverTooltipsPadding
Default "3px"

LINKMouseOverTooltipsBorderRadius
Default "3px"

LINKMouseOverTooltipsOpacity
Default 0.8

LINKLabelDragEvent
Default False, draggable for the label of LINK module

CHORDMouseEvent
Default True, open/not open mouse event of CHORD module from NG-Circos.

CHORDMouseFillColorExcluded
A type of color in character, chord in this color will be hided

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

CHORDMouseClickedOpacity
Opacity when mouse clicking

CHORDMouseClickedStrokeColor
Stroke color when mouse clicking

CHORDMouseClickedStrokeWidth
Stroke width when mouse clicking

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

CHORDMouseDownOpacity
Opacity when mouse moving down the element

CHORDMouseDownStrokeColor
Stroke color when mouse moving down the element

CHORDMouseDownStrokeWidth
Stroke width when mouse moving down the element

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

CHORDMouseEnterOpacity
Opacity when mouse entering the element

CHORDMouseEnterStrokeColor
Stroke color when mouse entering the element

CHORDMouseEnterStrokeWidth
Stroke width when mouse entering the element

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

CHORDMouseLeaveOpacity
Opacity when mouse leaving the element

CHORDMouseLeaveStrokeColor
Stroke color when mouse leaving the element

CHORDMouseLeaveStrokeWidth
Stroke width when mouse leaving the element

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

CHORDMouseMoveOpacity
Opacity when mouse moving in the element

CHORDMouseMoveStrokeColor
Stroke color when mouse moving in the element

CHORDMouseMoveStrokeWidth
Stroke width when mouse moving in the element

CHORDMouseOutDisplay
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
 HISTOGRAMMouseClickedStrokeColor
 Stroke color when mouse clicking
 HISTOGRAMMouseClickedStrokeWidth
 Stroke width when mouse clicking
 HISTOGRAMMouseDownDisplay
 Default False, show/not the tooltip when mouse click down a HISTOGRAM point.
 HISTOGRAMMouseDownColor
 Color when mouse moving down the element
 HISTOGRAMMouseDownOpacity
 Opacity when mouse moving up the element
 HISTOGRAMMouseDownStrokeColor
 Stroke color when mouse moving up the element
 HISTOGRAMMouseDownStrokeWidth
 Stroke width when mouse moving up the element

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

HISTOGRAMMouseEnterColor
Color when mouse entering the element

HISTOGRAMMouseEnterOpacity
Opacity when mouse entering the element

HISTOGRAMMouseEnterStrokeColor
Stroke color when mouse entering the element

HISTOGRAMMouseEnterStrokeWidth
Stroke width when mouse entering the element

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

HISTOGRAMMouseLeaveColor
Color when mouse leaving the element

HISTOGRAMMouseLeaveOpacity
Opacity when mouse leaving the element

HISTOGRAMMouseLeaveStrokeColor
Stroke color when mouse leaving the element

HISTOGRAMMouseLeaveStrokeWidth
Stroke width when mouse leaving the element

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

HISTOGRAMMouseMoveColor
Color when mouse moving in the element

HISTOGRAMMouseMoveOpacity
Opacity when mouse moving in the element

HISTOGRAMMouseMoveStrokeColor
Stroke color when mouse moving in the element

HISTOGRAMMouseMoveStrokeWidth
Stroke width when mouse moving in the element

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

HISTOGRAMMouseOutAnimationTime
Animation time when mouse moving out the element

HISTOGRAMMouseOutColor
Color when mouse moving out the element

HISTOGRAMMouseOutOpacity
Opacity when mouse moving out the element

HISTOGRAMMouseOutStrokeColor
Stroke color when mouse moving out the element

HISTOGRAMMouseOutStrokeWidth
Stroke width when mouse moving out the element

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

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

LINEMouseDownLineStrokeColor
Stroke color when mouse moving down the element

LINEMouseDownLineStrokeWidth
Stroke width when mouse moving down the element

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

LINEMouseEnterLineOpacity
Line opacity when mouse entering the element

LINEMouseEnterLineStrokeColor
Stroke color when mouse entering the element

LINEMouseEnterLineStrokeWidth
Stroke width when mouse entering the element

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

LINEMouseLeaveLineOpacity
Line opacity when mouse leaving the element

LINEMouseLeaveLineStrokeColor
Stroke color when mouse leaving the element

LINEMouseLeaveLineStrokeWidth
Stroke width when mouse leaving the element

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

LINEMouseMoveLineOpacity
Line opacity when mouse moving in the element

LINEMouseMoveLineStrokeColor
Stroke color when mouse moving in the element

LINEMouseMoveLineStrokeWidth
Stroke width when mouse moving in the element

LINEMouseOutDisplay
Defalut False, hide/not tooltip when mouse is not hovering a LINE point any-
more.

LINEMouseOutAnimationTime
Animation time when mouse moving out the element

LINEMouseOutLineOpacity
Line opacity when mouse moving out the element

LINEMouseOutLineStrokeColor
Stroke color when mouse moving out the element

LINEMouseOutLineStrokeWidth
Stroke width when mouse moving out the element

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

LINEMouseUpLineOpacity
Line opacity when mouse moving up the element

LINEMouseUpLineStrokeColor
Stroke color when mouse moving up the element

LINEMouseUpLineStrokeWidth
Stroke width when mouse moving up the element

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

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

WIGMouseEnterLineStrokeColor	Stroke color when mouse entering the element
WIGMouseEnterLineStrokeWidth	Stroke width when mouse entering the element
WIGMouseEnterFillColor	Filling color when mouse entering the element
WIGMouseLeaveDisplay	Default False, show/not the tooltip when mouse mover leave a WIG point.
WIGMouseLeaveLineOpacity	Line opacity when mouse leaving the element
WIGMouseLeaveLineStrokeColor	Stroke color when mouse leaving the element
WIGMouseLeaveLineStrokeWidth	Stroke width when mouse leaving the element
WIGMouseLeaveFillColor	Filling color when mouse leaving the element
WIGMouseMoveDisplay	Default False, show/not the tooltip when mouse move into a WIG point.
WIGMouseMoveLineOpacity	Line opacity when mouse moving in the element
WIGMouseMoveLineStrokeColor	Stroke color when mouse moving in the element
WIGMouseMoveLineStrokeWidth	Stroke width when mouse moving in the element
WIGMouseMoveFillColor	Filling color when mouse leaving the element
WIGMouseOutDisplay	Defalut False, hide/not tooltip when mouse is not hovering a WIG point anymore.
WIGMouseOutAnimationTime	Animation time when mouse moving out the element
WIGMouseOutLineOpacity	Line opacity when mouse moving out the element
WIGMouseOutLineStrokeColor	Stroke color when mouse moving out the element
WIGMouseOutLineStrokeWidth	Stroke width when mouse moving out the element
WIGMouseOutFillColor	Filling color when mouse moving out the element
WIGMouseUpDisplay	Default False, show/not the tooltip when mouse click up a WIG point.
WIGMouseUpLineOpacity	Line opacity when mouse moving up the element
WIGMouseUpLineStrokeColor	Stroke color when mouse moving up the element
WIGMouseUpLineStrokeWidth	Stroke width when mouse moving up the element
WIGMouseUpFillColor	Filling color when mouse moving up the element

WIGMouseOverDisplay
 Default False, show/not the tooltip when mouse hover on a WIG point.

WIGMouseOverLineOpacity
 Line opacity when mouse moving over the element

WIGMouseOverLineStrokeColor
 Stroke color when mouse moving over the element

WIGMouseOverLineStrokeWidth
 Stroke width when mouse moving over the element

WIGMouseOverFillColor
 Filling color when mouse moving over the element

WIGMouseOverTooltipsSetting
 Default "style1"

WIGMouseOverTooltipsHtml
 Default " "

WIGMouseOverTooltipsPosition
 Default "absolute"

WIGMouseOverTooltipsBackgroundColor
 Default "white"

WIGMouseOverTooltipsBorderStyle
 Default "solid"

WIGMouseOverTooltipsBorderWidth
 Default 0

WIGMouseOverTooltipsPadding
 Default "3px"

WIGMouseOverTooltipsBorderRadius
 Default "3px"

WIGMouseOverTooltipsOpacity
 Default 0.8

SCATTERxlink Default False, add/not xlink for SCATTER module

SCATTERMouseEvent
 Default True, open/not open mouse event of SCATTER module

SCATTERMouseClickedDisplay
 Default False, show/not the tooltip when mouse click on a SCATTER point.

SCATTERMouseClickedColor
 Color when mouse clicking the element

SCATTERMouseClickedCircleSize
 Circle size when mouse clicking the element

SCATTERMouseClickedCircleOpacity
 Circle opacity when mouse clicking the element

SCATTERMouseClickedCircleStrokeColor
 Circle stroke color when mouse clicking the element

SCATTERMouseClickedCircleStrokeWidth
 Circle stroke width when mouse clicking the element

SCATTERMouseClickedTextFromData
 Text column when mouse clicking the element

SCATTERMouseClickedTextOpacity
 Text opacity when mouse clicking the element

SCATTERMouseClickedTextColor
 Text color when mouse clicking the element

SCATTERMouseClickedTextSize
Text size when mouse clicking the element

SCATTERMouseClickedTextPostionX, SCATTERMouseClickedTextPostionY
Text coordinates when mouse clicking the element

SCATTERMouseClickedTextDrag
Whether text is draggable when clicing element

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

SCATTERMouseDownColor
Color when mouse moving down the element

SCATTERMouseDownCircleSize
Circle size when mouse moving down the element

SCATTERMouseDownCircleOpacity
Circle opacity when mouse moving down the element

SCATTERMouseDownCircleStrokeColor
Circle stroke color when mouse moving down the element

SCATTERMouseDownCircleStrokeWidth
Circle stroke width when mouse moving down the element

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

SCATTERMouseEnterColor
Color when mouse entering the element

SCATTERMouseEnterCircleSize
Circle size when mouse entering the element

SCATTERMouseEnterCircleOpacity
Circle opacity when mouse entering the element

SCATTERMouseEnterCircleStrokeColor
Circle stroke color when mouse entering the element

SCATTERMouseEnterCircleStrokeWidth
Circle stroke width when mouse entering the element

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

SCATTERMouseLeaveColor
Color when mouse leaving the element

SCATTERMouseLeaveCircleSize
Circle size when mouse leaving the element

SCATTERMouseLeaveCircleOpacity
Circle opacity when mouse leaving the element

SCATTERMouseLeaveCircleStrokeColor
Circle stroke color when mouse leaving the element

SCATTERMouseLeaveCircleStrokeWidth
Circle stroke width when mouse leaving the element

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

SCATTERMouseMoveColor
Color when mouse moving in the element

SCATTERMouseMoveCircleSize
Circle size when mouse moving in the element

SCATTERMouseMoveCircleOpacity
Circle opacity when mouse moving in the element

SCATTERMouseMoveCircleStrokeColor
Circle stroke color when mouse moving in the element

SCATTERMouseMoveCircleStrokeWidth
Circle stroke width when mouse moving in the element

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

SCATTERMouseOutAnimationTime
Animation time when mouse moving out the element

SCATTERMouseOutColor
Color when mouse moving out the element

SCATTERMouseOutCircleSize
Circle size when mouse moving out the element

SCATTERMouseOutCircleOpacity
Circle opacity when mouse moving out the element

SCATTERMouseOutCircleStrokeColor
Circle stroke color when mouse moving out the element

SCATTERMouseOutCircleStrokeWidth
Circle stroke width when mouse moving out the element

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

SCATTERMouseUpColor
Color when mouse moving up the element

SCATTERMouseUpCircleSize
Circle size when mouse moving up the element

SCATTERMouseUpCircleOpacity
Circle opacity when mouse moving up the element

SCATTERMouseUpCircleStrokeColor
Circle stroke color when mouse moving up the element

SCATTERMouseUpCircleStrokeWidth
Circle stroke width when mouse moving up the element

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

SCATTERMouseOverColor
Color when mouse moving over the element

SCATTERMouseOverCircleSize
Circle size when mouse moving over the element

SCATTERMouseOverCircleOpacity
Circle opacity when mouse moving over the element

SCATTERMouseOverCircleStrokeColor
Circle stroke color when mouse moving over the element

SCATTERMouseOverCircleStrokeWidth
Circle stroke width when mouse moving over the element

SCATTERMouseOverTooltipsSetting
Default "style1"

SCATTERMouseOverTooltipsHtml
 Default " "
 SCATTERMouseOverTooltipsPosition
 Default "absolute"
 SCATTERMouseOverTooltipsBackgroundColor
 Default "white"
 SCATTERMouseOverTooltipsBorderStyle
 Default "solid"
 SCATTERMouseOverTooltipsBorderWidth
 Default 0
 SCATTERMouseOverTooltipsPadding
 Default "3px"
 SCATTERMouseOverTooltipsBorderRadius
 Default "3px"
 SCATTERMouseOverTooltipsOpacity
 Default 0.8
 ARCXlink Default False, add/not xlink for ARC module
 ARCMouseEvent Default True, open/not open mouse event of ARC module
 ARCMouseClickDisplay
 Default False, show/not the tooltip when mouse click on a ARC point.
 ARCMouseClickColor
 Color when mouse clicking the element
 ARCMouseClickArcOpacity
 Arc opacity when mouse clicking the element
 ARCMouseClickArcStrokeColor
 Arc stroke color when mouse clicking the element
 ARCMouseClickArcStrokeWidth
 Arc stroke width when mouse clicking the element
 ARCMouseClickTextFromData
 Text column when mouse clicking the element
 ARCMouseClickTextOpacity
 Text opacity when mouse clicking the element
 ARCMouseClickTextColor
 Text color when mouse clicking the element
 ARCMouseClickTextSize
 Text size when mouse clicking the element
 ARCMouseClickTextPostionX, ARCMouseClickTextPostionY
 Text coordinates when mouse clicking the element
 ARCMouseClickTextDrag
 Whether text is draggable when mouse clicking the element
 ARCMouseDownDisplay
 Default False, show/not the tooltip when mouse click down a ARC point.
 ARCMouseDownColor
 Color when mouse moving down the element
 ARCMouseDownArcOpacity
 Arc opacity when mouse moving down the element
 ARCMouseDownArcStrokeColor
 Arc stroke color when mouse moving down the element

ARCMouseDownArcStrokeWidth
 Arc stroke width when mouse moving down the element
 ARCMouseEnterDisplay
 Default False, show/not the tooltip when mouse mover over a ARC point.
 ARCMouseEnterColor
 Color when mouse entering the element
 ARCMouseEnterArcOpacity
 Arc opacity when mouse entering the element
 ARCMouseEnterArcStrokeColor
 Arc stroke color when mouse entering the element
 ARCMouseEnterArcStrokeWidth
 Arc stroke width when mouse entering the element
 ARCMouseLeaveDisplay
 Default False, show/not the tooltip when mouse mover leave a ARC point.
 ARCMouseLeaveColor
 Color when mouse leaving the element
 ARCMouseLeaveArcOpacity
 Arc opacity when mouse leaving the element
 ARCMouseLeaveArcStrokeColor
 Arc stroke color when mouse leaving the element
 ARCMouseLeaveArcStrokeWidth
 Arc stroke width when mouse leaving the element
 ARCMouseMoveDisplay
 Default False, show/not the tooltip when mouse move into a ARC point.
 ARCMouseMoveColor
 Color when mouse moving in the element
 ARCMouseMoveArcOpacity
 Arc opacity when mouse moving in the element
 ARCMouseMoveArcStrokeColor
 Arc stroke color when mouse moving in the element
 ARCMouseMoveArcStrokeWidth
 Arc stroke width when mouse moving in the element
 ARCMouseOutDisplay
 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

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

Circos-shiny

*Shiny bindings for interacCircos***Description**

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

Usage

```
CircosOutput(outputId, width = "100%", height = "100%")
```

```
renderCircos(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 interacCircos
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.

CircosArc

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

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

Usage

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

Arguments

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

Examples

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

CircosAuxLine

*Create a AUXILIAYLINE module to a moduleList***Description**

A auxiliary line displayed in the visualization

Usage

```
CircosAuxLine(
  modulename,
  startX = 20,
  startY = 20,
  endX = 120,
  endY = 120,
  color = "red",
  width = 0.5,
  type = "straight",
  controlPointX = 0,
  controlPointY = 0,
  lineType = "solid",
  dashArray = 3,
  marker = TRUE,
  markerType = "circle",
  markerColor = "blue",
  markerHeight = 5,
  markerWidth = 5,
  markerPosition = 2,
```

```

    animationDisplay = FALSE,
    animationTime = 50,
    animationDelay = 1000,
    animationType = "linear",
    ...
)

```

Arguments

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

Examples

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

CircosBackground

Create a *BACKGROUND* module to be added to a *moduleList*

Description

Simple background to display behind another module

Usage

```

CircosBackground(
  modulename,
  compareGroup = 1,
  fillColors = "#EEEEFF",
  borderColors = "#000000",
  axisShow = FALSE,
  axisColor = "#000",
  axisOpacity = 0.5,
  axisNum = 4,
  axisWidth = 0.3,
  maxRadius = 190,
  minRadius = 105,
  borderSize = 0.3,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  ...
)

```

Arguments

<code>modulename</code>	The name of the new module.
<code>compareGroup</code>	The group number of this module in compare module
<code>fillColors</code>	The color of the background element, in hexadecimal RGB format.
<code>borderColors</code>	The color of the background borders, in hexadecimal RGB format.
<code>axisShow</code>	Whether show a axis or not
<code>axisWidth, axisColor, axisOpacity, axisNum</code>	The color, opacity value and number of line for axis
<code>minRadius, maxRadius</code>	Where the module should begin and end
<code>borderSize</code>	The thickness of the background borders.
<code>animationDisplay</code>	Whether display a animation or not
<code>animationTime, animationDelay, animationType</code>	The time, delay and display type for animation
<code>...</code>	Ignored

Examples

```

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

```

CircosBubble

*Create a BUBBLE module to a moduleList***Description**

A bubble plot displayed in the visualization

Usage

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

Arguments

<code>modulename</code>	The name of the new module.
<code>compareGroup</code>	The group number of this module in compare module
<code>maxRadius, minRadius</code>	Where the module should begin and end.
<code>blockStroke</code>	Whether display the stroke between each bubble block
<code>blockStrokeColor</code>	Stroke color for block
<code>blockStrokeWidth</code>	Stroke width for block
<code>blockFill</code>	Whether fill a block or not
<code>blockFillColor</code>	The color for filling the block
<code>bubbleMaxSize</code>	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
Circos(CircosBubble('Bubble01', maxRadius = 230, minRadius = 170, data=bubbleData,
blockStroke = TRUE, bubbleMaxSize =10, bubbleMinSize = 2, maxColor = "red", minColor = "yellow",
totalLayer =3, animationDisplay = TRUE, animationType="linear"),
genome = list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"= 27905053,"X"=22422827,"4"=1351857),
BUBBLEMouseOverDisplay =TRUE,innerRadius = 236)
```

CircosChord

Create a CHORD module of NG-Circos to a moduleList

Description

Display a chord module using a data matrix.

Usage

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



```

    data,
    ...
)

```

Arguments

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

Examples

```

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

```

CircosChord.p	Create a <i>CHORD</i> module of <i>circosJS</i> to a <i>moduleList</i>
---------------	--

Description

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

Usage

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

Arguments

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

Examples

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

CircosCnv	Create a <i>CNV</i> module to a <i>moduleList</i>
-----------	---

Description

A copy number variance module displayed in the visualization

Usage

```

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

```

Arguments

<code>modulename</code>	The name of the new module.
<code>compareGroup</code>	The group number of this module in compare module
<code>maxRadius, minRadius</code>	Where the module should begin and end.
<code>width</code>	Width for CNV module
<code>color</code>	Color for CNV module
<code>ValueAxisManualScale</code>	Whether manually control the scale of value
<code>ValueAxisMaxScale, ValueAxisMinScale</code>	The max and min scale value for manually control
<code>strokeColor, strokeWidth</code>	The color and width for stroke
<code>opacity</code>	The opacity for module
<code>animationDisplay</code>	Whether display animation
<code>animationTime, animationDelay, animationType</code>	The time, delay and display type for animation
<code>data</code>	A list of CNV with details including start, end, value, link, color and html. Details can be found on document.
<code>...</code>	Ignored

Examples

```

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

```

```
CNVMouseOverDisplay = TRUE)
```

CircosGene

Create a *GENE* module to a *moduleList*

Description

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

Usage

```
CircosGene(
  modulename,
  compareGroup = 1,
  outerRadius = 180,
  innerRadius = 150,
  pathColor = "black",
  pathWidth = 1,
  arrow = TRUE,
  arrowGap = 2,
  arrowColor = "blue",
  arrowSize = 5,
  cdsColor = "#1e77b3",
  cdsStrokeColor = "black",
  cdsStrokeWidth = 1,
  utrWidth = -5,
  utrColor = "blue",
  utrStrokeColor = "blue",
  utrStrokeWidth = 1,
  animationDisplay = FALSE,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)
```

Arguments

modulename	The name of the new module.
compareGroup	The group number of this module in compare module
outerRadius, innerRadius	Where the module should begin and end.
pathColor	The color for path between gene elements
pathWidth	The width for path between gene elements
arrow	Whether display arrows on path
arrowGap, arrowColor, arrowSize	The gap, color and size for arrow

<code>cdsColor, cdsStrokeColor, cdsStrokeWidth</code>	The color, stroke color and stroke width for coding
<code>utrWidth, utrColor, utrStrokeColor, utrStrokeWidth</code>	The max size for bubble
<code>animationDisplay</code>	Whether display animation
<code>animationTime, animationDelay, animationType</code>	The time, delay and display type for animation
<code>data</code>	A list of gene with details including chr, strand, start, end, type, name, link and html. Details can be found on document.
<code>...</code>	Ignored

Examples

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

CircosHeatmap

Create a HEATMAP module to a moduleList

Description

A heatmap plot displayed in the visualization

Usage

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

Arguments

modulename	The name of the new module.
compareGroup	The group number of this module in compare module
maxRadius, minRadius	Where the module should begin and end.
minColor	The color for heatmap 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
Circos(CircosHeatmap('Heatmap01', maxRadius= 180, minRadius = 100, data=heatmapData,totalLayer = 3),
genome = list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"=27905053,"4"=1351857,"X"=22422827),
HEATMAPMouseEvent = TRUE,HEATMAPMouseOverDisplay = TRUE)
```

CircosHistogram

*Create a HISTOGRAM module to a moduleList***Description**

Display a multi-layer histogram in circos

Usage

```
CircosHistogram(
  modulename,
  compareGroup = 1,
  maxRadius = 108,
  minRadius = 95,
```

```

    ValueAxisManualScale = FALSE,
    ValueAxisMaxScale = 10,
    ValueAxisMinScale = 0,
    fillColor = "red",
    animationDisplay = FALSE,
    animationTime = 2000,
    animationDelay = 20,
    data,
    ...
)

```

Arguments

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

Examples

```

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

```

CircosLegend

Create a *LEGEND* module to a moduleList

Description

Simple legend annotation displayed in the visualization.

Usage

```

CircosLegend(
  modulename,
  x = 20,
  y = 20,
  title = "legend",
  size = 6,
  weight = "normal",
  GapBetweenGraphicText = 5,
  GapBetweenLines = 20,
  data,
  ...
)

```

Arguments

<code>modulename</code>	The name of the new module.
<code>x, y</code>	Coordinates of the lower left corner of the annotation
<code>title</code>	The title for legend
<code>size</code>	Font size for title, with units specified (such as em or px).
<code>weight</code>	Font weight for title. Can be "normal", "bold", "bolder" or "lighter".
<code>GapBetweenGraphicText</code>	Gap between icon and text in legend.
<code>GapBetweenLines</code>	Gap between each two lines in legend
<code>data</code>	A list of legend with details including type, color, opacity, circleSize, rectSize, lineWidth, lineHeight, text, textSize and textWeight. Details can be found on document.
<code>...</code>	Ignored

Examples

```

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

```

CircosLine

Create a LINE module to a moduleList

Description

Display a multi-layer line plot in circos

Usage

```

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

```

Arguments

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

Examples

```

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

```

CircosLink

*Create a LINK module to a moduleList***Description**

Link two specific region in genome.

Usage

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

Arguments

modulename	The name of the new module.
compareGroup	The group number of thic module in compare module
radius	Radius of link circle.
fillColor	Color for link.
width	Width for link.
type	Type of link, could be Q/S/T
displayLinkAxis	Whether display axis for link or not
axisColor	The color for axis
axisWidth	The width for axis
axisPad	The pad for axis
displayLinkLabel	Whether display label for link or not

labelColor	The color for label
labelSize	The size for label
labelPad	The pad for label
animationDisplay	Whether display animation
animationDirection	The direction of link animation, could be 1to2 or 2to1
animationTime, animationDelay, animationType	The time, delay and display type for animation
data	A list of link with details including g1chr, g1start, g1end, g2chr, g2start, g2end, g1name, g2name, fusion, link and html. Details can be found on document.
...	Ignored

Examples

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

CircosLollipop

Create a LOLLIPOP module to a moduleList

Description

Display a lollipop plot in the visualization

Usage

```
CircosLollipop(
  modulename,
  compareGroup = 1,
  fillColor = "#9400D3",
  secondColor = "#FFFFFF",
  pointType = "circle",
  circleSize = 2,
  diamondWidth = 10,
  diamondHeight = 5,
  rectWidth = 2,
  rectHeight = 2,
  stroke = TRUE,
  strokeColor = "#000000",
  strokeWidth = 0.5,
  lineAutoHeight = TRUE,
  lineAutoMaximumHeightZoomRate = 1,
  lineHeightRate = 0.75,
  lineWidth = 2,
  lineColor = "#000000",
  realStart = 0,
  ValueAxisManualScale = FALSE,
```

```

    ValueAxisMaxScale = 10,
    ValueAxisMinScale = 0,
    animationDisplay = FALSE,
    animationTime = 2000,
    animationDelay = 20,
    animationType = "bounce",
    data,
    ...
)

```

Arguments

modulename	The name of the new module.
compareGroup	The group number of this module in compare module
fillColor	Filling color for lollipop
secondColor	Second filling color for heterogeneous lollipop
pointType	The type for lollipop, could be circle, rect and diamond
circleSize	If circle, the size for lollipop
diamondWidth, diamondHeight	If diamond, the width and height for lollipop
rectWidth, rectHeight	If rect, the width and height for lollipop
stroke	Whether display the stroke for lollipop
strokeColor, strokeWidth	The color and width for stroke
lineAutoHeight	Whether auto assign the height for each lollipop
lineAutoMaximumHeightZoomRate	If auto assign, the zoom rate for each lollipop
lineHeightRate	If manually assign, the rate of lollipop compared to real value
lineWidth, lineColor	The width and color for the line of lollipop
realStart	The real start position for data in genome.
ValueAxisManualScale	Whether manually control the scale of value
ValueAxisMaxScale, ValueAxisMinScale	The max and min scale value for manually control
animationDisplay	Whether display animation
animationTime, animationDelay, animationType	The time, delay and display type for animation
data	A list of lollipop value with details including protein, chr, pos, strand, Cancer-TypeNumber, color, link, Consequence, AA_pos, AA_change, type, link and html. Details can be found on document.
...	Ignored

Examples

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

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

Description

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

Usage

```
CircosModuleList()

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

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

Arguments

x	The moduleList on which other modules should be added or removed.
...	The modules to add (as moduleLists) or to remove (as module names).

CircosScatter	<i>Create a SCATTER module to a moduleList</i>
---------------	--

Description

Display a point plot in circos

Usage

```
CircosScatter(
  modulename,
  compareGroup = 1,
  radius = 140,
  innerCircleSize = 1,
  outerCircleSize = 5,
  innerCircleColor = "#F26223",
  outerCircleColor = "#F26223",
  innerPointType = "circle",
```

```

    outerPointType = "circle",
    innerrectWidth = 2,
    innerrectHeight = 2,
    outerrectWidth = 2,
    outerrectHeight = 2,
    outerCircleOpacity = 1,
    random_data = 0,
    animationDisplay = FALSE,
    animationInitialPositionX = 0,
    animationInitialPositionY = 0,
    animationTime = 2000,
    animationDelay = 20,
    animationType = "bounce",
    data,
    ...
)

```

Arguments

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

Examples

```

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

```

CircosSnp

*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

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

Arguments

modulename	The name of the new module.
compareGroup	The group number of this module in compare module
maxRadius, minRadius	Where the module should begin and end
fillColorType	The type of filling color, could be either specific or r2(means based on r2)
fillColor	If specific, the color for SNP filling
fillr2Color	If r2, the color for SNP filling
ValueAxisManualScale	Whether manually control the scale of value
ValueAxisMaxScale, ValueAxisMinScale	The max and min scale value for manually control
pointType	The type of SNP point, could be circle or rect
circleSize	If circle, the size for SNP circle

rectWidth	If rect, the width for SNP rect
rectHeight	If rect, the height for SNP rect
animationDisplay	Whether display animation
animationInitialPositionX, animationInitialPositionY	The initial position coordinates for animation
animationTime, animationDelay, animationType	The time, delay and display type for animation
data	A list of SNP value with details including chr, pos, value, des, color, r2value, link, index, image and html. Details can be found on document.
...	Ignored

Examples

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

CircosText

Create Text module to be added to a moduleList

Description

Simple text annotation displayed in the visualization

Usage

```
CircosText(
  modulename,
  text,
  x = 0,
  y = 0,
  size = "1.2em",
  weight = "bold",
  opacity = 1,
  color = "#000000",
  rotateRate = 0,
  animationDisplay = FALSE,
  animationInitialSize = 20,
  animationInitialWeight = "bold",
  animationInitialColor = "black",
  animationInitialOpacity = 1,
  animationInitialPositionX = 0,
  animationInitialPositionY = 0,
  animationInitialRotate = 0,
  animationDelay = 50,
  animationTime = 1000,
  animationType = "linear",
  ...
)
```


Arguments

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

Examples

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

Description

Display a multi-layer line plot in circos

Usage

```

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

```

Arguments

<code>modulename</code>	The name of the new module.
<code>compareGroup</code>	The group number of this module in compare module
<code>maxRadius, minRadius</code>	Where the module should begin and end
<code>direction</code>	The direction of plot, either inside or outside
<code>ValueAxisManualScale</code>	Whether manually control the scale of value
<code>ValueAxisMaxScale, ValueAxisMinScale</code>	The max and min scale value for manually control
<code>color</code>	Color for plot
<code>opacity</code>	Opacity for plot
<code>strokeColor</code>	The color for stroke
<code>strokeWidth</code>	The width for stroke
<code>strokeType</code>	Line type for stroke, could be linear, cardinal, basis and monotone
<code>animationDisplay</code>	Whether display animation
<code>animationTime, animationDelay, animationType</code>	The time, delay and display type for animation
<code>data</code>	A list of value with details including chr, pos, des, value and html. Details can be found on document.
<code>...</code>	Ignored

Examples

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

cnvExample

Cnv module example data

Description

The data is in matrix with column names

Usage

```
cnvExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

value value

link hyperlink for cnv

color color

html The external html language

geneExample

Gene plot example data

Description

The data is in matrix with column names

Usage

```
geneExample
```

Format

A data frame with 8 columns:

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

heatmapExample

Heatmap plot example data

Description

The data is in matrix with column names

Usage

heatmapExample

Format

A data frame with 7 columns:

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

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

Description

The data is in matrix with column names

Usage

```
histogramExample
```

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

name name for description

link hyperlink

value value

html The external html language

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

Description

The data is in matrix with column names

Usage

```
lineExample
```

Format

A data frame with 5 columns:

chr chromosome

pos position

des description

value value

html The external html language

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

Description

The data is in matrix with column names

Usage

linkExample

Format

A data frame with 11 columns:

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

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

Description

The data is in matrix with column names

Usage

lollipopExample

Format

A data frame with 12 columns:

protein protein name

chr chromosome

pos position

strand strand, - or +

CancerTypeNumber Cancer type number

color color

link hyperlink

Consequence consequence

AA_pos AA_pos

AA_change AA_change

type type for mutation,Hetero or Homo

html The external html language

scatterExample

Scatter plot example data

Description

The data is in matrix with column names

Usage

scatterExample

Format

A data frame with 7 columns:

chr chromosome

start start position

end end position

name name for scatter

des description

link hyperlink

html The external html language

`snpExample`*Snp plot example data*

Description

The data is in matrix with column names

Usage`snpExample`**Format**

A data frame with 10 columns:

chr chromosome

pos position

value value, such as p-value

des description

color color

r2value r2 value

link hyperlink for snp

index index for combination

image image for combination

html The external html language

`wigExample`*Wig plot example data*

Description

The data is in matrix with column names

Usage`wigExample`**Format**

A data frame with 5 columns:

chr chromosome

pos position

des description

value value

html The external html language

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