

# Package ‘rNGCircos’

December 9, 2020

**Type** Package

**Title** Next Generation Circos in R

**Version** 1.0.0

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**Description**

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

**License** MIT

**Encoding** UTF-8

**LazyData** true

**Depends** R (>= 3.1.0)

**Imports** RColorBrewer, htmlwidgets, jsonlite, plyr, grDevices

**RoxygenNote** 7.1.0

**Suggests** testthat,  
knitr,  
rmarkdown

**VignetteBuilder** knitr

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

The data is in matrix with row names

## Usage

```
arcExample
```

## Format

A data frame with 7 columns:

**chr** chromosome

**start** start position

**end** end position

**color** color

**des** description

**link** hyperlink

**html** The external html language

---

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

**Description**

The data is in matrix with row names

**Usage**

```
bubbleExample
```

**Format**

A data frame with 8 columns:

**chr** chromosome

**start** start position

**end** end position

**name** name for description

**value** value

**color** specified color for bubble

**layer** layer number

**html** The external html language

---

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

**Description**

The data is in matrix with row names

**Usage**

```
chordExample
```

**Format**

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

**column name** the name for each arc

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

---

`cnvExample`*Cnv module example data*

---

**Description**

The data is in matrix with row names

**Usage**`cnvExample`**Format**

A data frame with 7 columns:

**chr** chromosome

**start** start position

**end** end position

**value** value

**link** hyperlink for cnv

**color** color

**html** The external html language

---

`geneExample`*Gene plot example data*

---

**Description**

The data is in matrix with row names

**Usage**`geneExample`**Format**

A data frame with 8 columns:

**chr** chromosome

**strand** strand, - or +

**start** start position

**end** end position

**type** region type, gene or utr or cds

**name** name for description

**link** hyperlink for this region

**html** The external html language

---

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

**Description**

The data is in matrix with row names

**Usage**

```
heatmapExample
```

**Format**

A data frame with 7 columns:

**chr** chromosome

**start** start position

**end** end position

**name** name for description

**value** value

**layer** layer number

**html** The external html language

---

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

**Description**

The data is in matrix with row names

**Usage**

```
histogramExample
```

**Format**

A data frame with 7 columns:

**chr** chromosome

**start** start position

**end** end position

**name** name for description

**link** hyperlink

**value** value

**html** The external html language

---

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

**Description**

The data is in matrix with row names

**Usage**

```
lineExample
```

**Format**

A data frame with 5 columns:

**chr** chromosome

**pos** position

**des** description

**value** value

**html** The external html language

---

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

**Description**

The data is in matrix with row names

**Usage**

```
linkExample
```

**Format**

A data frame with 11 columns:

**g1chr** first chromosome

**g1start** first start position

**g1end** first end position

**g2chr** second chromosome

**g2start** second start position

**g2end** second end position

**g1name** first name

**g2name** second name

**fusion** fusion name

**link** hyperlink for link line

**html** The external html language

---

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

**Description**

The data is in matrix with row names

**Usage**

```
lollipopExample
```

**Format**

A data frame with 12 columns:

**protein** protein name

**chr** chromosome

**pos** position

**strand** strand, - or +

**CancerTypeNumber** Cancer type number

**color** color

**link** hyperlink

**Consequence** consequence

**AA\_pos** AA\_pos

**AA\_change** AA\_change

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

**html** The external html language

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rNGCircos	<i>rNGCircos</i>
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**Description**

A R packages based on Next Generation Circos

**Usage**

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

```
outerRadius = 240,  
svgClassName = "rNGCircos",  
displayGenomeBorder = TRUE,  
genomeBorderColor = "#000",  
genomeBorderSize = 0.5,  
genomeTicksDisplay = FALSE,  
genomeTicksLen = 5,  
genomeTicksColor = "#000",  
genomeTicksTextSize = "0.6em",  
genomeTicksRealLength = TRUE,  
genomeTicksTextColor = "#000",  
genomeTicksScale = 3e+07,  
genomeTicksOffset = 0,  
genomeLabelDisplay = TRUE,  
genomeLabelTextSize = "10pt",  
genomeLabelTextColor = "#000",  
genomeLabelDx = 0,  
genomeLabelDy = 0,  
compareEvent = FALSE,  
compareEventGroupGapRate = 0.1,  
compareEventGroupDistance = 0,  
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TEXTModuleDragEvent = FALSE,  
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CNVMouseEvent = TRUE,  
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CNVMouseClickedArcStrokeWidth = 0,  
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CNVMouseClickedTextOpacity = 1,  
CNVMouseClickedTextColor = "red",  
CNVMouseClickedTextSize = 8,  
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CNVMouseClickedTextPostionY = 0,  
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CNVMouseDownArcOpacity = 1,  
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CNVMouseDownArcStrokeWidth = 0,  
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CNVMouseEnterArcOpacity = 1,  
CNVMouseEnterArcStrokeColor = "#F26223",  
CNVMouseEnterArcStrokeWidth = 0,  
CNVMouseLeaveDisplay = FALSE,  
CNVMouseLeaveColor = "pink",  
CNVMouseLeaveArcOpacity = 1,  
CNVMouseLeaveArcStrokeColor = "#F26223",  
CNVMouseLeaveArcStrokeWidth = 0,
```



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CNVMouseMoveArcOpacity = 1,
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HEATMAPMouseClickedStrokeWidth = "none",
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HEATMAPMouseEnterColor = "green",
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HEATMAPMouseOverTooltipsBorderStyle = "solid",
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BUBBLEMouseClickedStrokeColor = "none",
BUBBLEMouseClickedStrokeWidth = "none",
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BUBBLEMouseDownOpacity = 1,
BUBBLEMouseDownStrokeColor = "none",
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BUBBLEMouseEnterStrokeWidth = "none",
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BUBBLEMouseLeaveOpacity = 1,
BUBBLEMouseLeaveStrokeColor = "none",
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```

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BUBBLEMouseMoveOpacity = 1,
BUBBLEMouseMoveStrokeColor = "none",
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BUBBLEMouseOutAnimationTime = 500,
BUBBLEMouseOutColor = "green",
BUBBLEMouseOutOpacity = 1,
BUBBLEMouseOutStrokeColor = "none",
BUBBLEMouseOutStrokeWidth = "none",
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BUBBLEMouseUpColor = "green",
BUBBLEMouseUpOpacity = 1,
BUBBLEMouseUpStrokeColor = "none",
BUBBLEMouseUpStrokeWidth = "none",
BUBBLEMouseOverDisplay = FALSE,
BUBBLEMouseOverColor = "green",
BUBBLEMouseOverOpacity = 1,
BUBBLEMouseOverStrokeColor = "none",
BUBBLEMouseOverStrokeWidth = "none",
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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,
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SNPMouseCombinationImageTitleSize = 5,
SNPMouseCombinationImageTitleWeight = "bold",
SNPMouseCombinationImageTitleColor = "black",
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SNPMouseCombinationImagePositionY = 0,
SNPMouseCombinationImageHeight = 200,
SNPMouseCombinationImageWidth = 300,
SNPMouseCombinationGraphDisplay = FALSE,
SNPMouseCombinationGraphTitle = "This is graph",
SNPMouseCombinationGraphTitleSize = 5,
SNPMouseCombinationGraphTitleWeight = "bold",
SNPMouseCombinationGraphTitleColor = "black",
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SNPMouseCombinationGraphWidth = 300,
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```

```

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SNPMouseClickCircleStrokeColor = "#F26223",
SNPMouseClickCircleStrokeWidth = 0,
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SNPMouseEnterColor = "yellow",
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```

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LINKMouseEnterOpacity = 1,
```

```

LINKMouseEnterStrokeColor = "none",
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LINKMouseMoveStrokeColor = "none",
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CHORDMouseEnterOpacity = 1,
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```

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```

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HISTOGRAMMouseOverTooltipsSetting = "style1",
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LINEMouseOverLineStrokeWidth = "none",
LINEMouseOverTooltipsSetting = "style1",
LINEMouseOverTooltipsHtml = " ",

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LINEMouseOverTooltipsPosition = "absolute",
LINEMouseOverTooltipsBackgroundColor = "white",
LINEMouseOverTooltipsBorderStyle = "solid",
LINEMouseOverTooltipsBorderWidth = 0,
LINEMouseOverTooltipsPadding = "3px",
LINEMouseOverTooltipsBorderRadius = "3px",
LINEMouseOverTooltipsOpacity = 1,
WIGMouseEvent = TRUE,
WIGMouseClickedDisplay = FALSE,
WIGMouseClickedLineOpacity = 1,
WIGMouseClickedLineStrokeColor = "none",
WIGMouseClickedLineStrokeWidth = "none",
WIGMouseClickedFillColor = "none",
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WIGMouseDownLineStrokeColor = "none",
WIGMouseDownLineStrokeWidth = "none",
WIGMouseDownFillColor = "none",
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WIGMouseEnterLineStrokeColor = "none",
WIGMouseEnterLineStrokeWidth = "none",
WIGMouseEnterFillColor = "none",
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WIGMouseLeaveLineOpacity = 1,
WIGMouseLeaveLineStrokeColor = "none",
WIGMouseLeaveLineStrokeWidth = "none",
WIGMouseLeaveFillColor = "none",
WIGMouseMoveDisplay = FALSE,
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WIGMouseMoveLineStrokeColor = "none",
WIGMouseMoveLineStrokeWidth = "none",
WIGMouseMoveFillColor = "none",
WIGMouseOutDisplay = FALSE,
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WIGMouseOutLineOpacity = 1,
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WIGMouseOutLineStrokeWidth = "none",
WIGMouseOutFillColor = "none",
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WIGMouseUpLineStrokeWidth = "none",
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WIGMouseOverLineOpacity = 1,
WIGMouseOverLineStrokeColor = "none",
WIGMouseOverLineStrokeWidth = "none",
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WIGMouseOverTooltipsSetting = "style1",
WIGMouseOverTooltipsHtml = " ",
WIGMouseOverTooltipsPosition = "absolute",
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```

WIGMouseOverTooltipsBackgroundColor = "white",
WIGMouseOverTooltipsBorderStyle = "solid",
WIGMouseOverTooltipsBorderWidth = 0,
WIGMouseOverTooltipsPadding = "3px",
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SCATTERMouseEvent = TRUE,
SCATTERMouseClickedDisplay = FALSE,
SCATTERMouseClickedColor = "red",
SCATTERMouseClickedCircleSize = 2,
SCATTERMouseClickedCircleOpacity = 1,
SCATTERMouseClickedCircleStrokeColor = "none",
SCATTERMouseClickedCircleStrokeWidth = "none",
SCATTERMouseClickedTextFromData = "fourth",
SCATTERMouseClickedTextOpacity = 1,
SCATTERMouseClickedTextColor = "red",
SCATTERMouseClickedTextSize = 8,
SCATTERMouseClickedTextPostionX = 1,
SCATTERMouseClickedTextPostionY = 10,
SCATTERMouseClickedTextDrag = TRUE,
SCATTERMouseDownDisplay = FALSE,
SCATTERMouseDownColor = "red",
SCATTERMouseDownCircleSize = 2,
SCATTERMouseDownCircleOpacity = 1,
SCATTERMouseDownCircleStrokeColor = "none",
SCATTERMouseDownCircleStrokeWidth = "none",
SCATTERMouseEnterDisplay = FALSE,
SCATTERMouseEnterColor = "red",
SCATTERMouseEnterCircleSize = 2,
SCATTERMouseEnterCircleOpacity = 1,
SCATTERMouseEnterCircleStrokeColor = "none",
SCATTERMouseEnterCircleStrokeWidth = "none",
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SCATTERMouseLeaveColor = "red",
SCATTERMouseLeaveCircleSize = 2,
SCATTERMouseLeaveCircleOpacity = 1,
SCATTERMouseLeaveCircleStrokeColor = "none",
SCATTERMouseLeaveCircleStrokeWidth = "none",
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SCATTERMouseMoveColor = "red",
SCATTERMouseMoveCircleSize = 2,
SCATTERMouseMoveCircleOpacity = 1,
SCATTERMouseMoveCircleStrokeColor = "none",
SCATTERMouseMoveCircleStrokeWidth = "none",
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SCATTERMouseOutAnimationTime = 500,
SCATTERMouseOutColor = "red",
SCATTERMouseOutCircleSize = 2,
SCATTERMouseOutCircleOpacity = 1,
SCATTERMouseOutCircleStrokeColor = "none",
SCATTERMouseOutCircleStrokeWidth = "none",

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SCATTERMouseUpDisplay = FALSE,
SCATTERMouseUpColor = "red",
SCATTERMouseUpCircleSize = 2,
SCATTERMouseUpCircleOpacity = 1,
SCATTERMouseUpCircleStrokeColor = "none",
SCATTERMouseUpCircleStrokeWidth = "none",
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SCATTERMouseOverColor = "red",
SCATTERMouseOverCircleSize = 2,
SCATTERMouseOverCircleOpacity = 1,
SCATTERMouseOverCircleStrokeColor = "none",
SCATTERMouseOverCircleStrokeWidth = "none",
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SCATTERMouseOverTooltipsHtml = " ",
SCATTERMouseOverTooltipsPosition = "absolute",
SCATTERMouseOverTooltipsBackgroundColor = "white",
SCATTERMouseOverTooltipsBorderStyle = "solid",
SCATTERMouseOverTooltipsBorderWidth = 0,
SCATTERMouseOverTooltipsPadding = "3px",
SCATTERMouseOverTooltipsBorderRadius = "3px",
SCATTERMouseOverTooltipsOpacity = 1,
ARCxlink = FALSE,
ARCMouseEvent = TRUE,
ARCMouseClickDisplay = FALSE,
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ARCMouseClickArcOpacity = 1,
ARCMouseClickArcStrokeColor = "none",
ARCMouseClickArcStrokeWidth = "none",
ARCMouseClickTextFromData = "fourth",
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ARCMouseClickTextPostionY = 10,
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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",
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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",
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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",
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GENMouseClickedTextSize = 8,
GENMouseClickedTextPostionX = 1,
GENMouseClickedTextPostionY = 10,
GENMouseClickedTextDrag = TRUE,
GENMouseDownDisplay = FALSE,
GENMouseDownColor = "red",
GENMouseDownArcOpacity = 1,
GENMouseDownArcStrokeColor = "none",
GENMouseDownArcStrokeWidth = "none",
GENMouseEnterDisplay = FALSE,
GENMouseEnterColor = "red",
GENMouseEnterArcOpacity = 1,
GENMouseEnterArcStrokeColor = "none",
GENMouseEnterArcStrokeWidth = "none",

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GENEMouseLeaveDisplay = FALSE,
GENEMouseLeaveColor = "red",
GENEMouseLeaveArcOpacity = 1,
GENEMouseLeaveArcStrokeColor = "none",
GENEMouseLeaveArcStrokeWidth = "none",
GENEMouseMoveDisplay = FALSE,
GENEMouseMoveColor = "red",
GENEMouseMoveArcOpacity = 1,
GENEMouseMoveArcStrokeColor = "none",
GENEMouseMoveArcStrokeWidth = "none",
GENEMouseOutDisplay = FALSE,
GENEMouseOutAnimationTime = 500,
GENEMouseOutColor = "red",
GENEMouseOutArcOpacity = 1,
GENEMouseOutArcStrokeColor = "none",
GENEMouseOutArcStrokeWidth = "none",
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GENEMouseUpColor = "red",
GENEMouseUpArcOpacity = 1,
GENEMouseUpArcStrokeColor = "none",
GENEMouseUpArcStrokeWidth = "none",
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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,
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LOLLIPOPMouseEvent = TRUE,
LOLLIPOPMouseClickedDisplay = FALSE,
LOLLIPOPMouseClickedColor = "red",
LOLLIPOPMouseClickedCircleSize = 2,
LOLLIPOPMouseClickedCircleOpacity = 1,
LOLLIPOPMouseClickedCircleStrokeColor = "none",
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LOLLIPOPMouseClickedTextPostionX = 1,
LOLLIPOPMouseClickedTextPostionY = 10,
LOLLIPOPMouseClickedTextDrag = TRUE,
LOLLIPOPMouseDownDisplay = FALSE,
LOLLIPOPMouseDownColor = "red",

```

```

LOLLIPOPMouseDownCircleSize = 2,
LOLLIPOPMouseDownCircleOpacity = 1,
LOLLIPOPMouseDownCircleStrokeColor = "none",
LOLLIPOPMouseDownCircleStrokeWidth = "none",
LOLLIPOPMouseEnterDisplay = FALSE,
LOLLIPOPMouseEnterColor = "red",
LOLLIPOPMouseEnterCircleSize = 2,
LOLLIPOPMouseEnterCircleOpacity = 1,
LOLLIPOPMouseEnterCircleStrokeColor = "none",
LOLLIPOPMouseEnterCircleStrokeWidth = "none",
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LOLLIPOPMouseLeaveColor = "red",
LOLLIPOPMouseLeaveCircleSize = 2,
LOLLIPOPMouseLeaveCircleOpacity = 1,
LOLLIPOPMouseLeaveCircleStrokeColor = "none",
LOLLIPOPMouseLeaveCircleStrokeWidth = "none",
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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",
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LOLLIPOPMouseOverColor = "red",
LOLLIPOPMouseOverCircleSize = 2,
LOLLIPOPMouseOverCircleOpacity = 1,
LOLLIPOPMouseOverCircleStrokeColor = "none",
LOLLIPOPMouseOverCircleStrokeWidth = "none",
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LOLLIPOPMouseOverTooltipsHtml = " ",
LOLLIPOPMouseOverTooltipsPosition = "absolute",
LOLLIPOPMouseOverTooltipsBackgroundColor = "white",
LOLLIPOPMouseOverTooltipsBorderStyle = "solid",
LOLLIPOPMouseOverTooltipsBorderWidth = 0,
LOLLIPOPMouseOverTooltipsPadding = "3px",
LOLLIPOPMouseOverTooltipsBorderRadius = "3px",
LOLLIPOPMouseOverTooltipsOpacity = 1,
elementId = NULL,
...

```

)

**Arguments**

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

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



CNVMouseMoveArcStrokeWidth  
Arc stroke width when mouse moving in the element

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

CNVMouseOutAnimationTime  
Animation time when mouse moving out the element

CNVMouseOutColor  
Color when mouse moving out the element

CNVMouseOutArcOpacity  
Arc opacity when mouse moving out the element

CNVMouseOutArcStrokeColor  
Arc stroke color when mouse moving out the element

CNVMouseOutArcStrokeWidth  
Arc stroke width when mouse moving out the element

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

CNVMouseUpColor  
Color when mouse moving up the element

CNVMouseUpArcOpacity  
Arc opacity when mouse clicking the element

CNVMouseUpArcStrokeColor  
Arc stroke color when mouse clicking the element

CNVMouseUpArcStrokeWidth  
Arc stroke width when mouse clicking the element

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

CNVMouseOverColor  
Color when mouse moving over the element

CNVMouseOverArcOpacity  
Arc opacity when mouse moving over the element

CNVMouseOverArcStrokeColor  
Arc stroke color when mouse moving over the element

CNVMouseOverArcStrokeWidth  
Arc stroke width when mouse moving over the element

CNVMouseOverTooltipsSetting  
Default "style1"

CNVMouseOverTooltipsHtml  
Default " "

CNVMouseOverTooltipsPosition  
Default "absolute"

CNVMouseOverTooltipsBackgroundColor  
Default "white"

CNVMouseOverTooltipsBorderStyle  
Default "solid"

CNVMouseOverTooltipsBorderWidth  
Default 0

CNVMouseOverTooltipsPadding  
Default "3px"

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

HEATMAPMouseMoveColor  
Color when mouse moving in the element

HEATMAPMouseMoveOpacity  
Opacity when mouse moving in the element

HEATMAPMouseMoveStrokeColor  
Stroke color when mouse moving in the element

HEATMAPMouseMoveStrokeWidth  
Stroke width when mouse moving in the element

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

HEATMAPMouseOutAnimationTime  
Animation time when mouse moving out the element

HEATMAPMouseOutColor  
Color when mouse moving out the element

HEATMAPMouseOutOpacity  
Opacity when mouse moving out the element

HEATMAPMouseOutStrokeColor  
Stroke color when mouse moving out the element

HEATMAPMouseOutStrokeWidth  
Stroke width when mouse moving out the element

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

HEATMAPMouseUpColor  
Color when mouse moving up the element

HEATMAPMouseUpOpacity  
Opacity when mouse moving up the element

HEATMAPMouseUpStrokeColor  
Stroke color when mouse moving up the element

HEATMAPMouseUpStrokeWidth  
Stroke width when mouse moving up the element

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

HEATMAPMouseOverColor  
Color when mouse moving over the element

HEATMAPMouseOverOpacity  
Opacity when mouse moving over the element

HEATMAPMouseOverStrokeColor  
Stroke color when mouse moving over the element

HEATMAPMouseOverStrokeWidth  
Stroke width when mouse moving over the element

HEATMAPMouseOverTooltipsSetting  
Default "style1"

HEATMAPMouseOverTooltipsHtml  
Default " "

HEATMAPMouseOverTooltipsPosition  
Default "absolute"

HEATMAPMouseOverTooltipsBackgroundColor  
Default "white"

HEATMAPMouseOverTooltipsBorderStyle  
     Default "solid"  
 HEATMAPMouseOverTooltipsBorderWidth  
     Default 0  
 HEATMAPMouseOverTooltipsPadding  
     Default "3px"  
 HEATMAPMouseOverTooltipsBorderRadius  
     Default "3px"  
 HEATMAPMouseOverTooltipsOpacity  
     Default 0.8  
 BUBBLExlink      Default False, add/not xlink for BUBBLE module  
 BUBBLEMouseEvent  
     Default True, open/not open mouse event of BUBBLE module  
 BUBBLEMouseClickedDisplay  
     Default False, show/not the tooltip when mouse click on a BUBBLE point.  
 BUBBLEMouseClickedColor  
     Color when mouse clicking  
 BUBBLEMouseClickedOpacity  
     Opacity when mouse clicking  
 BUBBLEMouseClickedStrokeColor  
     Stroke color when mouse clicking  
 BUBBLEMouseClickedStrokeWidth  
     Stroke width when mouse clicking  
 BUBBLEMouseDownDisplay  
     Default False, show/not the tooltip when mouse click down a BUBBLE point.  
 BUBBLEMouseDownColor  
     Color when mouse moving down the element  
 BUBBLEMouseDownOpacity  
     Opacity when mouse moving down the element  
 BUBBLEMouseDownStrokeColor  
     Stroke color when mouse moving down the element  
 BUBBLEMouseDownStrokeWidth  
     Stroke width when mouse moving down the element  
 BUBBLEMouseEnterDisplay  
     Default False, show/not the tooltip when mouse mover over a BUBBLE point.  
 BUBBLEMouseEnterColor  
     Color when mouse entering the element  
 BUBBLEMouseEnterOpacity  
     Opacity when mouse entering the element  
 BUBBLEMouseEnterStrokeColor  
     Stroke color when mouse entering the element  
 BUBBLEMouseEnterStrokeWidth  
     Stroke width when mouse entering the element  
 BUBBLEMouseLeaveDisplay  
     Default False, show/not the tooltip when mouse mover leave a BUBBLE point.  
 BUBBLEMouseLeaveColor  
     Color when mouse leaving the element  
 BUBBLEMouseLeaveOpacity  
     Opacity when mouse leaving the element

BUBBLEMouseLeaveStrokeColor	Stroke color when mouse leaving the element
BUBBLEMouseLeaveStrokeWidth	Stroke width when mouse leaving the element
BUBBLEMouseMoveDisplay	Default False, show/not the tooltip when mouse move into a BUBBLE point.
BUBBLEMouseMoveColor	Color when mouse moving in the element
BUBBLEMouseMoveOpacity	Opacity when mouse moving in the element
BUBBLEMouseMoveStrokeColor	Stroke color when mouse moving in the element
BUBBLEMouseMoveStrokeWidth	Stroke width when mouse moving in the element
BUBBLEMouseOutDisplay	Default False, hide/not tooltip when mouse is not hovering a BUBBLE point anymore.
BUBBLEMouseOutAnimationTime	Animation time when mouse moving out the element
BUBBLEMouseOutColor	Color when mouse moving out the element
BUBBLEMouseOutOpacity	Opacity when mouse moving out the element
BUBBLEMouseOutStrokeColor	Stroke color when mouse moving out the element
BUBBLEMouseOutStrokeWidth	Stroke width when mouse moving out the element
BUBBLEMouseUpDisplay	Default False, show/not the tooltip when mouse click up a BUBBLE point.
BUBBLEMouseUpColor	Color when mouse moving up the element
BUBBLEMouseUpOpacity	Opacity when mouse moving up the element
BUBBLEMouseUpStrokeColor	Stroke color when mouse moving up the element
BUBBLEMouseUpStrokeWidth	Stroke width when mouse moving up the element
BUBBLEMouseOverDisplay	Default False, show/not the tooltip when mouse hover on a BUBBLE point.
BUBBLEMouseOverColor	Color when mouse moving over the element
BUBBLEMouseOverOpacity	Opacity when mouse moving over the element
BUBBLEMouseOverStrokeColor	Stroke color when mouse moving over the element
BUBBLEMouseOverStrokeWidth	Stroke width when mouse moving over the element

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

SNPMouseCombinationGraphHistogramPadding  
 Padding between bar of histogram graph

SNPMouseCombinationGraphHistogramPositionCorrectX  
 Correction distance of X axis in histogram

SNPMouseCombinationGraphPieAutoColor  
 Whether use auto color for pie graph or not

SNPMouseCombinationGraphPieColor  
 Color for pie graph if auto color is false

SNPMouseCombinationGraphPieSize  
 Size of pie graph

SNPMouseCombinationGraphPieStroke  
 Whether each pie has a stroke or not

SNPMouseCombinationGraphPieStrokeColor, SNPMouseCombinationGraphPieStrokeWidth  
 The stroke color and width for pie graph

SNPMouseCombinationGraphPieOpacity  
 Opacity for pie graph

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

SNPMouseCombinationGraphLinePoint  
 Whether display the broken point in line graph

SNPMouseCombinationGraphLinePointSize  
 Size of broken point

SNPMouseCombinationGraphLinePointAutoColor  
 Whether display the broken point in auto color

SNPMouseCombinationGraphLinePointColor  
 Color for broken point if auto color is false

SNPMouseCombinationGraphLinePointStroke  
 Whether display the broken point stroke

SNPMouseCombinationGraphLinePointStrokeColor, SNPMouseCombinationGraphLinePointStrokeWidth  
 The stroke color and width for broken point

SNPMouseCombinationGraphLinePointOpacity  
 Opacity for broken line

SNPMouseCombinationGraphLinePositionCorrectX  
 Correction distance of X axis for line

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

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

SNPMouseCombinationTextPositionCorrectX, SNPMouseCombinationTextPositionCorrectY  
 The coordinates for text

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

SNPMouseClickColor  
 Color after clicking the element

SNPMouseClickCircleSize  
 Circle size after clicking the element

SNPMouseClickCircleOpacity  
 Opacity after clicking the element

SNPMouseClickCircleStrokeColor  
Stroke color after clicking the element

SNPMouseClickCircleStrokeWidth  
Stroke width after clicking the element

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

SNPMouseClickTextOpacity  
Text opacity after clicking the element

SNPMouseClickTextColor  
Text color after clicking the element

SNPMouseClickTextSize  
Text size after clicking the element

SNPMouseClickTextPostionX, SNPMouseClickTextPostionY  
Text coordinate after clicking the element

SNPMouseClickTextDrag  
Whether text is draggable for element

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

SNPMouseDownColor  
Color after mouse moving down the element

SNPMouseDownCircleSize  
Circle size after mouse moving down the element

SNPMouseDownCircleOpacity  
Circle opacity after mouse moving down the element

SNPMouseDownCircleStrokeColor  
Circle stroke color after mouse moving down the element

SNPMouseDownCircleStrokeWidth  
Circle stroke width after mouse moving down the element

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

SNPMouseEnterColor  
Color after mouse entering enter the element

SNPMouseEnterCircleSize  
Circle size after mouse entering the element

SNPMouseEnterCircleOpacity  
Circle opacity after mouse entering the element

SNPMouseEnterCircleStrokeColor  
Circle stroke color after mouse entering the element

SNPMouseEnterCircleStrokeWidth  
Circle stroke width after mouse entering the element

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

SNPMouseLeaveColor  
Color after mouse leaving the element

SNPMouseLeaveCircleSize  
Circle size after mouse leaving the element

SNPMouseLeaveCircleOpacity  
Circle opacity after mouse leaving the element



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

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

LINKMouseEnterStrokeWidth  
     Stroke width when mouse entering the element  
 LINKMouseLeaveDisplay  
     Default False, show/not the tooltip when mouse mover leave a LINK point.  
 LINKMouseLeaveOpacity  
     Opacity when mouse leaving the element  
 LINKMouseLeaveStrokeColor  
     Stroke color when mouse leaving the element  
 LINKMouseLeaveStrokeWidth  
     Stroke width when mouse leaving the element  
 LINKMouseMoveDisplay  
     Default False, show/not the tooltip when mouse move into a LINK point.  
 LINKMouseMoveOpacity  
     Opacity when mouse moving in the element  
 LINKMouseMoveStrokeColor  
     Stroke color when mouse moving in the element  
 LINKMouseMoveStrokeWidth  
     Stroke width when mouse moving in the element  
 LINKMouseOutDisplay  
     Defalut False, hide/not tooltip when mouse is not hovering a LINK point any-  
     more.  
 LINKMouseOutAnimationTime  
     Animation time when mouse moving out the element  
 LINKMouseOutOpacity  
     Opacity when mouse moving out the element  
 LINKMouseOutStrokeColor  
     Stroke color when mouse moving out the element  
 LINKMouseOutStrokeWidth  
     Stroke width when mouse moving out the element  
 LINKMouseUpDisplay  
     Default False, show/not the tooltip when mouse click up a LINK point.  
 LINKMouseUpOpacity  
     Opacity when mouse moving up the element  
 LINKMouseUpStrokeColor  
     Stroke color when mouse moving up the element  
 LINKMouseUpStrokeWidth  
     Stroke width when mouse moving up the element  
 LINKMouseOverDisplay  
     Default False, show/not the tooltip when mouse hover on a LINK point.  
 LINKMouseOverOpacity  
     Opacity when mouse moving over the element  
 LINKMouseOverStrokeColor  
     Stroke color when mouse moving over the element  
 LINKMouseOverStrokeWidth  
     Stroke width when mouse moving over the element  
 LINKMouseOverTooltipsSetting  
     Default "style1"  
 LINKMouseOverTooltipsHtml  
     Default " "

LINKMouseOverTooltipsPosition  
     Default "absolute"  
 LINKMouseOverTooltipsBackgroundColor  
     Default "white"  
 LINKMouseOverTooltipsBorderStyle  
     Default "solid"  
 LINKMouseOverTooltipsBorderWidth  
     Default 0  
 LINKMouseOverTooltipsPadding  
     Default "3px"  
 LINKMouseOverTooltipsBorderRadius  
     Default "3px"  
 LINKMouseOverTooltipsOpacity  
     Default 0.8  
 LINKLabelDragEvent  
     Default False, draggable for the label of LINK module  
 CHORDMouseEvent  
     Default True, open/not open mouse event of CHORD module  
 CHORDMouseFillColorExcluded  
     A type of color in character, chord in this color will be hided  
 CHORDMouseClickedDisplay  
     Default False, show/not the tooltip when mouse click on a CHORD point.  
 CHORDMouseClickedOpacity  
     Opacity when mouse clicking  
 CHORDMouseClickedStrokeColor  
     Stroke color when mouse clicking  
 CHORDMouseClickedStrokeWidth  
     Stroke width when mouse clicking  
 CHORDMouseDownDisplay  
     Default False, show/not the tooltip when mouse click down a CHORD point.  
 CHORDMouseDownOpacity  
     Opacity when mouse moving down the element  
 CHORDMouseDownStrokeColor  
     Stroke color when mouse moving down the element  
 CHORDMouseDownStrokeWidth  
     Stroke width when mouse moving down the element  
 CHORDMouseEnterDisplay  
     Default False, show/not the tooltip when mouse mover over a CHORD point.  
 CHORDMouseEnterOpacity  
     Opacity when mouse entering the element  
 CHORDMouseEnterStrokeColor  
     Stroke color when mouse entering the element  
 CHORDMouseEnterStrokeWidth  
     Stroke width when mouse entering the element  
 CHORDMouseLeaveDisplay  
     Default False, show/not the tooltip when mouse mover leave a CHORD point.  
 CHORDMouseLeaveOpacity  
     Opacity when mouse leaving the element

CHORDMouseLeaveStrokeColor  
     Stroke color when mouse leaving the element  
 CHORDMouseLeaveStrokeWidth  
     Stroke width when mouse leaving the element  
 CHORDMouseMoveDisplay  
     Default False, show/not the tooltip when mouse move into a CHORD point.  
 CHORDMouseMoveOpacity  
     Opacity when mouse moving in the element  
 CHORDMouseMoveStrokeColor  
     Stroke color when mouse moving in the element  
 CHORDMouseMoveStrokeWidth  
     Stroke width when mouse moving in the element  
 CHORDMouseOutDisplay  
     Default False, hide/not tooltip when mouse is not hovering a CHORD point anymore.  
 CHORDMouseOutAnimationTime  
     Animation time when mouse moving out the element  
 CHORDMouseOutOpacity  
     Opacity when mouse moving out the element  
 CHORDMouseOutStrokeColor  
     Stroke color when mouse moving out the element  
 CHORDMouseOutStrokeWidth  
     Stroke width when mouse moving out the element  
 CHORDMouseUpDisplay  
     Default False, show/not the tooltip when mouse click up a CHORD point.  
 CHORDMouseUpOpacity  
     Opacity when mouse moving up the element  
 CHORDMouseUpStrokeColor  
     Stroke color when mouse moving up the element  
 CHORDMouseUpStrokeWidth  
     Stroke width when mouse moving up the element  
 CHORDMouseOverDisplay  
     Default False, show/not the tooltip when mouse hover on a CHORD point.  
 CHORDMouseOverOpacity  
     Opacity when mouse moving over the element  
 CHORDMouseOverStrokeColor  
     Stroke color when mouse moving over the element  
 CHORDMouseOverStrokeWidth  
     Stroke width when mouse moving over the element  
 HISTOGRAMxlink Default False, add/not xlink for HISTOGRAM module  
 HISTOGRAMMouseEvent  
     Default True, open/not open mouse event of HISTOGRAM module  
 HISTOGRAMMouseClickedDisplay  
     Default False, show/not the tooltip when mouse click on a HISTOGRAM point.  
 HISTOGRAMMouseClickedColor  
     Color when mouse clicking  
 HISTOGRAMMouseClickedOpacity  
     Opacity when mouse clicking

HISTOGRAMMouseClickStrokeColor  
Stroke color when mouse clicking

HISTOGRAMMouseClickStrokeWidth  
Stroke width when mouse clicking

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

HISTOGRAMMouseDownColor  
Color when mouse moving down the element

HISTOGRAMMouseDownOpacity  
Opacity when mouse moving up the element

HISTOGRAMMouseDownStrokeColor  
Stroke color when mouse moving up the element

HISTOGRAMMouseDownStrokeWidth  
Stroke width when mouse moving up the element

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

HISTOGRAMMouseEnterColor  
Color when mouse entering the element

HISTOGRAMMouseEnterOpacity  
Opacity when mouse entering the element

HISTOGRAMMouseEnterStrokeColor  
Stroke color when mouse entering the element

HISTOGRAMMouseEnterStrokeWidth  
Stroke width when mouse entering the element

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

HISTOGRAMMouseLeaveColor  
Color when mouse leaving the element

HISTOGRAMMouseLeaveOpacity  
Opacity when mouse leaving the element

HISTOGRAMMouseLeaveStrokeColor  
Stroke color when mouse leaving the element

HISTOGRAMMouseLeaveStrokeWidth  
Stroke width when mouse leaving the element

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

HISTOGRAMMouseMoveColor  
Color when mouse moving in the element

HISTOGRAMMouseMoveOpacity  
Opacity when mouse moving in the element

HISTOGRAMMouseMoveStrokeColor  
Stroke color when mouse moving in the element

HISTOGRAMMouseMoveStrokeWidth  
Stroke width when mouse moving in the element

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

HISTOGRAMMouseOutAnimationTime  
Animation time when mouse moving out the element

HISTOGRAMMouseOutColor  
Color when mouse moving out the element

HISTOGRAMMouseOutOpacity  
Opacity when mouse moving out the element

HISTOGRAMMouseOutStrokeColor  
Stroke color when mouse moving out the element

HISTOGRAMMouseOutStrokeWidth  
Stroke width when mouse moving out the element

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

HISTOGRAMMouseUpColor  
Color when mouse moving up the element

HISTOGRAMMouseUpOpacity  
Opacity when mouse moving up the element

HISTOGRAMMouseUpStrokeColor  
Stroke color when mouse moving up the element

HISTOGRAMMouseUpStrokeWidth  
Stroke width when mouse moving up the element

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

HISTOGRAMMouseOverColor  
Color when mouse moving over the element

HISTOGRAMMouseOverOpacity  
Opacity when mouse moving over the element

HISTOGRAMMouseOverStrokeColor  
Stroke color when mouse moving over the element

HISTOGRAMMouseOverStrokeWidth  
Stroke width when mouse moving over the element

HISTOGRAMMouseOverTooltipsSetting  
Default "style1"

HISTOGRAMMouseOverTooltipsHtml  
Default " "

HISTOGRAMMouseOverTooltipsPosition  
Default "absolute"

HISTOGRAMMouseOverTooltipsBackgroundColor  
Default "white"

HISTOGRAMMouseOverTooltipsBorderStyle  
Default "solid"

HISTOGRAMMouseOverTooltipsBorderWidth  
Default 0

HISTOGRAMMouseOverTooltipsPadding  
Default "3px"

HISTOGRAMMouseOverTooltipsBorderRadius  
Default "3px"

HISTOGRAMMouseOverTooltipsOpacity  
 Default 0.8

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

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

LINEMouseClickedLineOpacity  
 Line opacity when mouse clicking the element

LINEMouseClickedLineStrokeColor  
 Stroke color when mouse clicking the element

LINEMouseClickedLineStrokeWidth  
 Stroke width when mouse clicking the element

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

LINEMouseDownLineOpacity  
 Line opacity when mouse moving down the element

LINEMouseDownLineStrokeColor  
 Stroke color when mouse moving down the element

LINEMouseDownLineStrokeWidth  
 Stroke width when mouse moving down the element

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

LINEMouseEnterLineOpacity  
 Line opacity when mouse entering the element

LINEMouseEnterLineStrokeColor  
 Stroke color when mouse entering the element

LINEMouseEnterLineStrokeWidth  
 Stroke width when mouse entering the element

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

LINEMouseLeaveLineOpacity  
 Line opacity when mouse leaving the element

LINEMouseLeaveLineStrokeColor  
 Stroke color when mouse leaving the element

LINEMouseLeaveLineStrokeWidth  
 Stroke width when mouse leaving the element

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

LINEMouseMoveLineOpacity  
 Line opacity when mouse moving in the element

LINEMouseMoveLineStrokeColor  
 Stroke color when mouse moving in the element

LINEMouseMoveLineStrokeWidth  
 Stroke width when mouse moving in the element

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

LINEMouseOutAnimationTime  
 Animation time when mouse moving out the element



LINEMouseOutLineOpacity  
     Line opacity when mouse moving out the element  
 LINEMouseOutLineStrokeColor  
     Stroke color when mouse moving out the element  
 LINEMouseOutLineStrokeWidth  
     Stroke width when mouse moving out the element  
 LINEMouseUpDisplay  
     Default False, show/not the tooltip when mouse click up a LINE point.  
 LINEMouseUpLineOpacity  
     Line opacity when mouse moving up the element  
 LINEMouseUpLineStrokeColor  
     Stroke color when mouse moving up the element  
 LINEMouseUpLineStrokeWidth  
     Stroke width when mouse moving up the element  
 LINEMouseOverDisplay  
     Default False, show/not the tooltip when mouse hover on a LINE point.  
 LINEMouseOverLineOpacity  
     Line opacity when mouse moving over the element  
 LINEMouseOverLineStrokeColor  
     Stroke color when mouse moving over the element  
 LINEMouseOverLineStrokeWidth  
     Stroke width when mouse moving over the element  
 LINEMouseOverTooltipsSetting  
     Default "style1"  
 LINEMouseOverTooltipsHtml  
     Default " "  
 LINEMouseOverTooltipsPosition  
     Default "absolute"  
 LINEMouseOverTooltipsBackgroundColor  
     Default "white"  
 LINEMouseOverTooltipsBorderStyle  
     Default "solid"  
 LINEMouseOverTooltipsBorderWidth  
     Default 0  
 LINEMouseOverTooltipsPadding  
     Default "3px"  
 LINEMouseOverTooltipsBorderRadius  
     Default "3px"  
 LINEMouseOverTooltipsOpacity  
     Default 0.8  
 WIGMouseEvent   Default True, open/not open mouse event of WIG module  
 WIGMouseClickDisplay  
     Default False, show/not the tooltip when mouse click on a WIG point.  
 WIGMouseClickLineOpacity  
     Line opacity when mouse clicking the element  
 WIGMouseClickLineStrokeColor  
     Stroke color when mouse clicking the element  
 WIGMouseClickLineStrokeWidth  
     Stroke width when mouse clicking the element

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

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

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

SCATTERMouseLeaveColor  
Color when mouse leaving the element

SCATTERMouseLeaveCircleSize  
Circle size when mouse leaving the element

SCATTERMouseLeaveCircleOpacity  
Circle opacity when mouse leaving the element

SCATTERMouseLeaveCircleStrokeColor  
Circle stroke color when mouse leaving the element

SCATTERMouseLeaveCircleStrokeWidth  
Circle stroke width when mouse leaving the element

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

SCATTERMouseMoveColor  
Color when mouse moving in the element

SCATTERMouseMoveCircleSize  
Circle size when mouse moving in the element

SCATTERMouseMoveCircleOpacity  
Circle opacity when mouse moving in the element

SCATTERMouseMoveCircleStrokeColor  
Circle stroke color when mouse moving in the element

SCATTERMouseMoveCircleStrokeWidth  
Circle stroke width when mouse moving in the element

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

SCATTERMouseOutAnimationTime  
Animation time when mouse moving out the element

SCATTERMouseOutColor  
Color when mouse moving out the element

SCATTERMouseOutCircleSize  
Circle size when mouse moving out the element

SCATTERMouseOutCircleOpacity  
Circle opacity when mouse moving out the element

SCATTERMouseOutCircleStrokeColor  
Circle stroke color when mouse moving out the element

SCATTERMouseOutCircleStrokeWidth  
Circle stroke width when mouse moving out the element

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

SCATTERMouseUpColor  
Color when mouse moving up the element

SCATTERMouseUpCircleSize  
Circle size when mouse moving up the element

SCATTERMouseUpCircleOpacity  
Circle opacity when mouse moving up the element

SCATTERMouseUpCircleStrokeColor  
Circle stroke color when mouse moving up the element

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

ARCMouseClickTextColor  
Text color when mouse clicking the element

ARCMouseClickTextSize  
Text size when mouse clicking the element

ARCMouseClickTextPostionX, ARCMouseClickTextPostionY  
Text coordinates when mouse clicking the element

ARCMouseClickTextDrag  
Whether text is draggable when mouse clicking the element

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

ARCMouseDownColor  
Color when mouse moving down the element

ARCMouseDownArcOpacity  
Arc opacity when mouse moving down the element

ARCMouseDownArcStrokeColor  
Arc stroke color when mouse moving down the element

ARCMouseDownArcStrokeWidth  
Arc stroke width when mouse moving down the element

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

ARCMouseEnterColor  
Color when mouse entering the element

ARCMouseEnterArcOpacity  
Arc opacity when mouse entering the element

ARCMouseEnterArcStrokeColor  
Arc stroke color when mouse entering the element

ARCMouseEnterArcStrokeWidth  
Arc stroke width when mouse entering the element

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

ARCMouseLeaveColor  
Color when mouse leaving the element

ARCMouseLeaveArcOpacity  
Arc opacity when mouse leaving the element

ARCMouseLeaveArcStrokeColor  
Arc stroke color when mouse leaving the element

ARCMouseLeaveArcStrokeWidth  
Arc stroke width when mouse leaving the element

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

ARCMouseMoveColor  
Color when mouse moving in the element

ARCMouseMoveArcOpacity  
Arc opacity when mouse moving in the element

ARCMouseMoveArcStrokeColor  
Arc stroke color when mouse moving in the element

ARCMouseMoveArcStrokeWidth  
Arc stroke width when mouse moving in the element

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

ARCMouseOutAnimationTime  
 Animation time when mouse moving out the element

ARCMouseOutColor  
 Color when mouse moving out the element

ARCMouseOutArcOpacity  
 Arc opacity when mouse moving out the element

ARCMouseOutArcStrokeColor  
 Arc stroke color when mouse moving out the element

ARCMouseOutArcStrokeWidth  
 Arc stroke width when mouse moving out the element

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

ARCMouseUpColor  
 Color when mouse moving up the element

ARCMouseUpArcOpacity  
 Arc opacity when mouse moving up the element

ARCMouseUpArcStrokeColor  
 Arc stroke color when mouse moving up the element

ARCMouseUpArcStrokeWidth  
 Arc stroke width when mouse moving up the element

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

ARCMouseOverColor  
 Color when mouse moving over the element

ARCMouseOverArcOpacity  
 Arc opacity when mouse moving over the element

ARCMouseOverArcStrokeColor  
 Arc stroke color when mouse moving over the element

ARCMouseOverArcStrokeWidth  
 Arc stroke width when mouse moving over the element

ARCMouseOverTooltipsSetting  
 Default "style1"

ARCMouseOverTooltipsHtml  
 Default " "

ARCMouseOverTooltipsPosition  
 Default "absolute"

ARCMouseOverTooltipsBackgroundColor  
 Default "white"

ARCMouseOverTooltipsBorderStyle  
 Default "solid"

ARCMouseOverTooltipsBorderWidth  
 Default 0

ARCMouseOverTooltipsPadding  
 Default "3px"

ARCMouseOverTooltipsBorderRadius  
 Default "3px"



ARCMouseOverTooltipsOpacity  
     Default 0.8  
 GENExlink      Default False, add/not xlink for GENE module  
 GENEMouseEvent   Default True, open/not open mouse event of GENE module  
 GENEMouseClickDisplay  
     Default False, show/not the tooltip when mouse click on a GENE point.  
 GENEMouseClickColor  
     Color when mouse clicking the element  
 GENEMouseClickArcOpacity  
     Arc opacity when mouse clicking the element  
 GENEMouseClickArcStrokeColor  
     Arc stroke color when mouse clicking the element  
 GENEMouseClickArcStrokeWidth  
     Arc stroke width when mouse clicking the element  
 GENEMouseClickTextFromData  
     Text column when mouse clicking the element  
 GENEMouseClickTextOpacity  
     Text opacity when mouse clicking the element  
 GENEMouseClickTextColor  
     Text color when mouse clicking the element  
 GENEMouseClickTextSize  
     Text size when mouse clicking the element  
 GENEMouseClickTextPostionX, GENEMouseClickTextPostionY  
     Text coordinates when mouse clicking the element  
 GENEMouseClickTextDrag  
     Whether text is draggable when mouse clicking the element  
 GENEMouseDownDisplay  
     Default False, show/not the tooltip when mouse click down a GENE point.  
 GENEMouseDownColor  
     Color when mouse moving down the element  
 GENEMouseDownArcOpacity  
     Arc opacity when mouse moving down the element  
 GENEMouseDownArcStrokeColor  
     Arc stroke color when mouse moving down the element  
 GENEMouseDownArcStrokeWidth  
     Arc stroke width when mouse moving down the element  
 GENEMouseEnterDisplay  
     Default False, show/not the tooltip when mouse mover over a GENE point.  
 GENEMouseEnterColor  
     Color when mouse entering the element  
 GENEMouseEnterArcOpacity  
     Arc opacity when mouse entering the element  
 GENEMouseEnterArcStrokeColor  
     Arc stroke color when mouse entering the element  
 GENEMouseEnterArcStrokeWidth  
     Arc stroke width when mouse entering the element  
 GENEMouseLeaveDisplay  
     Default False, show/not the tooltip when mouse mover leave a GENE point.

GENEMouseLeaveColor  
Color when mouse leaving the element

GENEMouseLeaveArcOpacity  
Arc opacity when mouse leaving the element

GENEMouseLeaveArcStrokeColor  
Arc stroke color when mouse leaving the element

GENEMouseLeaveArcStrokeWidth  
Arc stroke width when mouse leaving the element

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

GENEMouseMoveColor  
Color when mouse moving in the element

GENEMouseMoveArcOpacity  
Arc opacity when mouse moving in the element

GENEMouseMoveArcStrokeColor  
Arc stroke color when mouse moving in the element

GENEMouseMoveArcStrokeWidth  
Arc stroke width when mouse moving in the element

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

GENEMouseOutAnimationTime  
Animation time when mouse moving out the element

GENEMouseOutColor  
Color when mouse moving out the element

GENEMouseOutArcOpacity  
Arc opacity when mouse moving out the element

GENEMouseOutArcStrokeColor  
Arc stroke color when mouse moving out the element

GENEMouseOutArcStrokeWidth  
Arc stroke width when mouse moving out the element

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

GENEMouseUpColor  
Color when mouse moving up the element

GENEMouseUpArcOpacity  
Arc opacity when mouse moving up the element

GENEMouseUpArcStrokeColor  
Arc stroke color when mouse moving up the element

GENEMouseUpArcStrokeWidth  
Arc stroke width when mouse moving up the element

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

GENEMouseOverColor  
Color when mouse moving over the element

GENEMouseOverArcOpacity  
Arc opacity when mouse moving over the element

GENEMouseOverArcStrokeColor  
Arc stroke color when mouse moving over the element

GENEMouseOverArcStrokeWidth  
     Arc stroke width when mouse moving over the element  
 GENEMouseOverTooltipsSetting  
     Default "style1"  
 GENEMouseOverTooltipsHtml  
     Default " "  
 GENEMouseOverTooltipsPosition  
     Default "absolute"  
 GENEMouseOverTooltipsBackgroundColor  
     Default "white"  
 GENEMouseOverTooltipsBorderStyle  
     Default "solid"  
 GENEMouseOverTooltipsBorderWidth  
     Default 0  
 GENEMouseOverTooltipsPadding  
     Default "3px"  
 GENEMouseOverTooltipsBorderRadius  
     Default "3px"  
 GENEMouseOverTooltipsOpacity  
     Default 0.8  
 LOLLIPOPxlink   Default False, add/not xlink for LOLLIPOP module  
 LOLLIPOPMouseEvent  
     Default True, open/not open mouse event of LOLLIPOP module  
 LOLLIPOPMouseClickedDisplay  
     Default False, show/not the tooltip when mouse click on a LOLLIPOP point.  
 LOLLIPOPMouseClickedColor  
     Color when mouse clicking  
 LOLLIPOPMouseClickedCircleSize  
     Circle size when mouse clicking the element  
 LOLLIPOPMouseClickedCircleOpacity  
     Circle opacity when mouse clicking the element  
 LOLLIPOPMouseClickedCircleStrokeColor  
     Circle stroke color when mouse clicking the element  
 LOLLIPOPMouseClickedCircleStrokeWidth  
     Circle stroke width when mouse clicking the element  
 LOLLIPOPMouseClickedTextFromData  
     Text column when mouse clicking the element  
 LOLLIPOPMouseClickedTextOpacity  
     Text opacity when mouse clicking the element  
 LOLLIPOPMouseClickedTextColor  
     Text color when mouse clicking the element  
 LOLLIPOPMouseClickedTextSize  
     Text size when mouse clicking the element  
 LOLLIPOPMouseClickedTextPostionX, LOLLIPOPMouseClickedTextPostionY  
     Text coordinates when mouse clicking the element  
 LOLLIPOPMouseClickedTextDrag  
     Whether text is draggable when mouse clicking the element  
 LOLLIPOPMouseDownDisplay  
     Default False, show/not the tooltip when mouse click down a LOLLIPOP point.

LOLLIPOPMouseDownColor  
     Color when mouse moving down the element  
 LOLLIPOPMouseDownCircleSize  
     Circle size when mouse moving down the element  
 LOLLIPOPMouseDownCircleOpacity  
     Circle opacity when mouse moving down the element  
 LOLLIPOPMouseDownCircleStrokeColor  
     Circle stroke color when mouse moving down the element  
 LOLLIPOPMouseDownCircleStrokeWidth  
     Circle stroke width when mouse moving down the element  
 LOLLIPOPMouseEnterDisplay  
     Default False, show/not the tooltip when mouse mover over a LOLLIPOP point.  
 LOLLIPOPMouseEnterColor  
     Color when mouse entering the element  
 LOLLIPOPMouseEnterCircleSize  
     Circle size when mouse entering the element  
 LOLLIPOPMouseEnterCircleOpacity  
     Circle opacity when mouse entering the element  
 LOLLIPOPMouseEnterCircleStrokeColor  
     Circle stroke color when mouse entering the element  
 LOLLIPOPMouseEnterCircleStrokeWidth  
     Circle stroke width when mouse entering the element  
 LOLLIPOPMouseLeaveDisplay  
     Default False, show/not the tooltip when mouse mover leave a LOLLIPOP point.  
 LOLLIPOPMouseLeaveColor  
     Color when mouse leaving the element  
 LOLLIPOPMouseLeaveCircleSize  
     Circle size when mouse leaving the element  
 LOLLIPOPMouseLeaveCircleOpacity  
     Circle opacity when mouse leaving the element  
 LOLLIPOPMouseLeaveCircleStrokeColor  
     Circle stroke color when mouse leaving the element  
 LOLLIPOPMouseLeaveCircleStrokeWidth  
     Circle stroke width when mouse leaving the element  
 LOLLIPOPMouseMoveDisplay  
     Default False, show/not the tooltip when mouse move into a LOLLIPOP point.  
 LOLLIPOPMouseMoveColor  
     Color when mouse moving in the element  
 LOLLIPOPMouseMoveCircleSize  
     Circle size when mouse moving in the element  
 LOLLIPOPMouseMoveCircleOpacity  
     Circle opacity when mouse moving in the element  
 LOLLIPOPMouseMoveCircleStrokeColor  
     Circle stroke color when mouse moving in the element  
 LOLLIPOPMouseMoveCircleStrokeWidth  
     Circle stroke width when mouse moving in the element  
 LOLLIPOPMouseOutDisplay  
     Defalut False, hide/not tooltip when mouse is not hovering a LOLLIPOP point anymore.

LOLLIPOPMouseOutAnimationTime	Animation time when mouse moving out the element
LOLLIPOPMouseOutColor	Color when mouse moving out the element
LOLLIPOPMouseOutCircleSize	Circle size when mouse moving out the element
LOLLIPOPMouseOutCircleOpacity	Circle opacity when mouse moving out the element
LOLLIPOPMouseOutCircleStrokeColor	Circle stroke color when mouse moving out the element
LOLLIPOPMouseOutCircleStrokeWidth	Circle stroke width when mouse moving out the element
LOLLIPOPMouseUpDisplay	Default False, show/not the tooltip when mouse click up a LOLLIPOP point.
LOLLIPOPMouseUpColor	Color when mouse moving up the element
LOLLIPOPMouseUpCircleSize	Circle size when mouse moving up the element
LOLLIPOPMouseUpCircleOpacity	Circle opacity when mouse moving up the element
LOLLIPOPMouseUpCircleStrokeColor	Circle stroke color when mouse moving up the element
LOLLIPOPMouseUpCircleStrokeWidth	Circle stroke width when mouse moving up the element
LOLLIPOPMouseOverDisplay	Default False, show/not the tooltip when mouse hover on a LOLLIPOP point.
LOLLIPOPMouseOverColor	Color when mouse moving over the element
LOLLIPOPMouseOverCircleSize	Circle size when mouse moving over the element
LOLLIPOPMouseOverCircleOpacity	Circle opacity when mouse moving over the element
LOLLIPOPMouseOverCircleStrokeColor	Circle stroke color when mouse moving over the element
LOLLIPOPMouseOverCircleStrokeWidth	Circle stroke width when mouse moving over the element
LOLLIPOPMouseOverTooltipsSetting	Default "style1"
LOLLIPOPMouseOverTooltipsHtml	Default " "
LOLLIPOPMouseOverTooltipsPosition	Default "absolute"
LOLLIPOPMouseOverTooltipsBackgroundColor	Default "white"
LOLLIPOPMouseOverTooltipsBorderStyle	Default "solid"
LOLLIPOPMouseOverTooltipsBorderWidth	Default 0

```

LOLLIPOPMouseOverTooltipsPadding
    Default "3px"
LOLLIPOPMouseOverTooltipsBorderRadius
    Default "3px"
LOLLIPOPMouseOverTooltipsOpacity
    Default 0.8
elementId      the name of the HTML id to be used to contain the visualization.
...           Ignored

```

### Examples

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

---

rNGCircosArc	<i>Create a ARC module to a moduleList</i>
--------------	--

---

### Description

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

### Usage

```

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

```

### Arguments

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

## Examples

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

---

rNGCircosAuxLine

---

Create a AUXILIAYLINE module to a moduleList

---

## Description

A auxiliary line displayed in the visualization

## Usage

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

## Arguments

modulename	The name of the new module.
startX, startY	Start coordinates for auxiliary line.
endX, endY	End coordinates for auxiliary line.
color	Color for auxiliary line
width	Width for auxiliary line
type	Type for auxiliary line, could be straight/curve/broken

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

### Examples

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

---

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

---

### Description

Simple background to display behind another module

### Usage

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



**Arguments**

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

**Examples**

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

---

rNGCircosBubble	<i>Create a BUBBLE module to a moduleList</i>
-----------------	---

---

**Description**

A bubble plot displayed in the visualization

**Usage**

```
rNGCircosBubble(
  modulename,
  compareGroup = 1,
  maxRadius = 200,
  minRadius = 50,
  blockStroke = TRUE,
  blockStrokeColor = "black",
  blockStrokeWidth = 1,
  blockFill = FALSE,
  blockFillColor = "white",
  bubbleMaxSize = 5,
  bubbleMinSize = 2,
  minColor = "red",
  maxColor = "green",
  ValueAxisManualScale = FALSE,
  ValueAxisMaxScale = 10,
  ValueAxisMinScale = 0,
```

```

    totallayer = 1,
    animationDisplay = FALSE,
    animationTime = 2000,
    animationDelay = 20,
    animationType = "bounce",
    data,
    ...
)

```

## Arguments

<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
<code>bubbleMinSize</code>	The min size for bubble
<code>minColor</code>	The color the bubble with min value
<code>maxColor</code>	The color the bubble with max value
<code>ValueAxisManualScale</code>	Whether manually control the scale of value
<code>ValueAxisMaxScale, ValueAxisMinScale</code>	The max and min scale value for manually control
<code>totallayer</code>	The color and width for stroke
<code>animationDisplay</code>	Whether display animation
<code>animationTime, animationDelay, animationType</code>	The time, delay and display type for animation
<code>data</code>	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.
<code>...</code>	Ignored

## Examples

```

bubbleData<-bubbleExample
rNGCircos(rNGCircosBubble('Bubble01', maxRadius = 230, minRadius = 170, data=bubbleData, blockStroke = TRUE,
bubbleMaxSize=10, bubbleMinSize = 2, maxColor = "red", minColor = "yellow", totallayer=3, animationDisplay = TRUE,
animationType="linear"),genome = list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"= 27905053,"X"=22422827),
BUBBLEMouseOverDisplay =TRUE,innerRadius = 236)

```

rNGCircosChord

*Create a CHORD module to a moduleList***Description**

Display a chord module using a data matrix.

**Usage**

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

**Arguments**

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

Examples

```
chordData<-chordExample
rNGCircos(rNGCircosChord('CHORD', data = chordData,innerRadius= 210,outerRadius= 211,fillOpacity=0.67,
strokeColor="black",strokeWidth= "1px",outerARCText=FALSE),genome=list("C.CK" = 189.51,"C.NPK"=188,"GC.CK"=
"GC.NPK"=191.51,"Alphaproteobacteria"=70.16,"Betaproteobacteria"=23.51,"Gammaproteobacteria"=25.51,
"Deltaproteobacteria"=23.28,"Acidobacteria"=53.62,"Actinobacteria"=72.33,"Bacteroidetes"=22.41,
"Chloroflexi"=15.08,"Firmicutes"=10.72,"Gemmatimonadetes"=26.37,"Planctomycetes"=19.26,"Thaumarchaeota"=6.
"Verrucomicrobia"=8.3,"Ascomycota"=159.41,"Basidiomycota"=79.73,"Zygomycota"=139.29 ),outerRadius = 217,
genomeLabelDisplay = FALSE)
```

---

rNGCircosCnv	Create a CNV module to a moduleList
--------------	-------------------------------------

---

Description

A copy number variance module displayed in the visualization

Usage

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

Arguments

modulename	The name of the new module.
compareGroup	The group number of this module in compare module
maxRadius, minRadius	Where the module should begin and end.
width	Width for CNV module
color	Color for CNV module

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

### Examples

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

---

rNGCircosGene	<i>Create a GENE module to a moduleList</i>
---------------	---

---

### Description

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

### Usage

```
rNGCircosGene(
  modulename,
  compareGroup = 1,
  outerRadius = 180,
  innerRadius = 150,
  pathColor = "black",
  pathWidth = 1,
  arrow = TRUE,
  arrowGap = 2,
  arrowColor = "blue",
  arrowSize = 5,
  cdsColor = "#1e77b3",
  cdsStrokeColor = "black",
  cdsStrokeWidth = 1,
  utrWidth = -5,
  utrColor = "blue",
  utrStrokeColor = "blue",
  utrStrokeWidth = 1,
  animationDisplay = FALSE,
```

```

    animationTime = 2000,
    animationDelay = 20,
    animationType = "bounce",
    data,
    ...
)

```

### Arguments

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

### Examples

```

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

```

---

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

---

### Description

A heatmap plot displayed in the visualization

**Usage**

```

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

```

**Arguments**

<code>modulename</code>	The name of the new module.
<code>compareGroup</code>	The group number of this module in compare module
<code>maxRadius, minRadius</code>	Where the module should begin and end.
<code>minColor</code>	The color for heatmap with min value
<code>maxColor</code>	The color for heatmap with max value
<code>ValueAxisManualScale</code>	Whether manually control the scale of value
<code>ValueAxisMaxScale, ValueAxisMinScale</code>	The max and min scale value for manually control
<code>totallayer</code>	The color and width for stroke
<code>animationDisplay</code>	Whether display animation
<code>animationDirection</code>	The direction for animation. O2I: from outside to inside, I2O: from inside to outside
<code>animationColorDirection</code>	The color changing in animation. L2C: lowest to customized, H2C: highest to customized, the customized color should be defined in data
<code>animationTime, animationDelay, animationType</code>	The time, delay and display type for animation
<code>data</code>	A list of value in heatmap plot with details including chr, start, end, value, name, layer and html. Details can be found on document.
<code>...</code>	Ignored

## Examples

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

---

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

---

## Description

Display a multi-layer histogram in circos

## Usage

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

## Arguments

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



## Examples

```

histogramData<-histogramExample
rNGCircos(rNGCircosHistogram('HISTOGRAM01', data = histogramData,fillColor= "#ff7f0e",maxRadius = 210,
minRadius = 175),genome=list("2L"=23011544,"2R"=21146708,"3L"=24543557,"3R"= 27905053,"X"=22422827,"4"=13518
outerRadius = 220)

```

---

rNGCircosLegend

---

Create a *LEGEND* module to a moduleList

---

## Description

Simple legend annotation displayed in the visualization.

## Usage

```

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

```

## Arguments

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

## Examples

```

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

```

---

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

---

## Description

Display a multi-layer line plot in circos

## Usage

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

## Arguments

modulename	The name of the new module.
compareGroup	The group number of this module in compare module
maxRadius, minRadius	Where the module should begin and end
ValueAxisManualScale	Whether manually control the scale of value
ValueAxisMaxScale, ValueAxisMinScale	The max and min scale value for manually control
color	Color for line
width	Width for line
type	Type for line, could be linear, cardinal, basis and monotone
animationDisplay	Whether display animation
animationDirection	The direction of animation, could be S2E(start to end) or E2S(end to start)
animationTime, animationDelay, animationType	The time, delay and display type for animation

data	A list of value with details including chr, pos, des, value and html. Details can be found on document.
...	Ignored

## Examples

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

---

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

---

## Description

Link two specific region in genome.

## Usage

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

## Arguments

modulename	The name of the new module.
compareGroup	The group number of this module in compare module
radius	Radius of link circle.
fillColor	Color for link.

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

### Examples

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

---

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

---

### Description

Display a lollipop plot in the visualization

### Usage

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

```

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

```

### Arguments

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

---

rNGCircosModuleList     *Create a list of modules*

---

### Description

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

### Usage

```
rNGCircosModuleList()

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

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

### Arguments

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

---

rNGCircosScatter     *Create a SCATTER module to a moduleList*

---

### Description

Display a point plot in circos

**Usage**

```

rNGCircosScatter(
  modulename,
  compareGroup = 1,
  radius = 140,
  innerCircleSize = 1,
  outerCircleSize = 5,
  innerCircleColor = "#F26223",
  outerCircleColor = "#F26223",
  innerPointType = "circle",
  outerPointType = "circle",
  innerrectWidth = 2,
  innerrectHeight = 2,
  outerrectWidth = 2,
  outerrectHeight = 2,
  outerCircleOpacity = 1,
  random_data = 0,
  animationDisplay = FALSE,
  animationInitialPositionX = 0,
  animationInitialPositionY = 0,
  animationTime = 2000,
  animationDelay = 20,
  animationType = "bounce",
  data,
  ...
)

```

**Arguments**

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

animationTime, animationDelay, animationType	The time, delay and display type for animation
data	A list of value with details including chr, start, end, name, des, link and html. Details can be found on document.
...	Ignored

## Examples

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

---

rNGCircosSnp

---

*Create a module with SNPs to be added to a moduleList*


---

## Description

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

## Usage

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



**Arguments**

modulename	The name of the new module.
compareGroup	The group number of this module in compare module
maxRadius, minRadius	Where the module should begin and end
fillColorType	The type of filling color, could be either specific or r2(means based on r2)
fillColor	If specific, the color for SNP filling
fillr2Color	If r2, the color for SNP filling
ValueAxisManualScale	Whether manually control the scale of value
ValueAxisMaxScale, ValueAxisMinScale	The max and min scale value for manually control
pointType	The type of SNP point, could be circle or rect
circleSize	If circle, the size for SNP circle
rectWidth	If rect, the width for SNP rect
rectHeight	If rect, the height for SNP rect
animationDisplay	Whether display animation
animationInitialPositionX, animationInitialPositionY	The initial position coordinates for animation
animationTime, animationDelay, animationType	The time, delay and display type for animation
data	A list of SNP value with details including chr, pos, value, des, color, r2value, link, index, image and html. Details can be found on document.
...	Ignored

**Examples**

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

---

rNGCircosText

---

*Create Text module to be added to a moduleList*


---

**Description**

Simple text annotation displayed in the visualization

**Usage**

```

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

```

**Arguments**

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

```

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

```

## Examples

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

---

rNGCircosWig	Create a WIG module to a moduleList
--------------	-------------------------------------

---

## Description

Display a multi-layer line plot in circos

## Usage

```

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

```

## Arguments

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

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

## Examples

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

---

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

---

## Description

The data is in matrix with row names

## Usage

```
scatterExample
```

## Format

A data frame with 7 columns:

**chr** chromosome

**start** start position

**end** end position

**name** name for scatter

**des** description

**link** hyperlink

**html** The external html language

---

`snpExample`*Snp plot example data*

---

**Description**

The data is in matrix with row names

**Usage**`snpExample`**Format**

A data frame with 10 columns:

**chr** chromosome

**pos** position

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

**des** description

**color** color

**r2value** r2 value

**link** hyperlink for snp

**index** index for combination

**image** image for combination

**html** The external html language

---

`wigExample`*Wig plot example data*

---

**Description**

The data is in matrix with row names

**Usage**`wigExample`**Format**

A data frame with 5 columns:

**chr** chromosome

**pos** position

**des** description

**value** value

**html** The external html language

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