HeatMapChart Control Reference

Show values as a color grid of rows and columns.

Reference **Controls** **Charts** HeatMapChart

Available from FrameworX 10.1.6.

The HeatMapChart draws a grid of rows and columns in which the color of each cell represents a value. Use it to spot patterns at a glance, for example alarm counts by area and hour, zone temperatures over time, or quality results by line and shift. The color scale can be a gradient (low, mid, high) or a set of bands, and a legend bar shows the scale.

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Requirements

This component is Portable. It runs both on Windows and on Web Pages hosted on any platform.

Clients: works in the Rich Client and in the web client (HTML5), with the same values and layout on both. Verified on FrameworX 10.1.6.

Configuration

1. Go to **Displays / Draw**.
2. In the Components Panel, select **Charts**, then choose **HeatMapChart**.
3. Click or drag-and-drop the component into the drawing area.
4. Double-click the object to open the configuration window.

Data Binding

- **Tag mode** (default): fill the **Cells** list. Each cell has a **RowLabel**, a **ColumnLabel** and a **LinkedValue** (a number, a tag or an expression).
- **Table mode**: set **UseDataTable** to true and point **DataSourceLink** to a Dataset query or table (`@Dataset.Query.Name` / `@Dataset.Table.Name`) or a tag that holds a DataTable (`@Tag.Name`). **RowColumn**, **ColumnColumn** and **ValueColumn** name the columns that hold the row, the column and the value of each record.

Behavior

- A cell without a value (missing, non-numeric, or no record) is drawn with the **NoDataFill** color.
- At most 2,500 cells (rows × columns) are drawn. With more data, the first 2,500 cells in input order are drawn and the **CellLimitText** note is shown.
- With **UseBands**, **BandThresholds** such as `50;80` define the band limits (N limits give N+1 bands; a value equal to a limit belongs to the band above) and **BandColors** lists one color per band, lowest band first.
- When labels do not fit, only every k-th row or column label is drawn.
- At runtime, a click on a cell writes the text `row|column` (the displayed labels) to the tag in **SelectedItemLink**. The tag is written only when its value changes.

Properties

Property	Description	Default
Cells	Tag mode: the list of cells (RowLabel, ColumnLabel, LinkedValue).	(empty)
UseDataTable	Read the cells from a table instead of the Cells list.	false
DataSourceLink	Table mode: the data source (Dataset query or table, or a DataTable tag).	(empty)
RowColumn	Table mode: column that holds the row of each record.	Row
ColumnColumn	Table mode: column that holds the column of each record.	Column
ValueColumn	Table mode: column that holds the value of each record.	Value
MinValue / MaxValue	Values at the low and high ends of the color scale. When not set, the scale follows the data.	(not set)
UseMidColor	Gradient through MidFill in the middle of the scale (low mid high).	true
UseBands	Use a banded color scale (BandThresholds and BandColors) instead of the gradient.	false

BandThresholds	Semicolon-separated band limits, with "." as decimal separator, for example `50;80`.	(empty)
BandColors	Semicolon-separated band colors (#RRGGBB or #AARRGGBB), lowest band first. A missing entry uses the gradient color.	(empty)
ShowValues	Show the value inside each cell.	false
ValueFormat	Format of the cell values.	0.##
ShowRowLabels	Show the row labels at the left of the grid.	true
ShowColumnLabels	Show the column labels under the grid.	true
ShowLegend	Show the legend bar with the color scale.	true
ShowToolTips	Show tooltips on the cells.	true
CellSpacing	Space between cells, in pixels.	1
LabelFontSize	Font size of the labels.	11
LabelFontFamily	Font family of the labels.	Verdana
CellLimitText	Note shown when the data has more than 2,500 cells.	Cell limit reached (2500)
SelectedItemLink	Optional tag that receives the clicked cell as `row|column`.	(empty)
Localize	Enable runtime text localization.	false

Colors follow the Display theme by default: each color property has a theme slot. Set an explicit color (#AARRGGBB) only to override the theme. Color properties: **LowFill** (theme green), **MidFill** (theme amber), **HighFill** (theme red), **NoDataFill** (theme disabled background) and **LabelForeground** .

Example

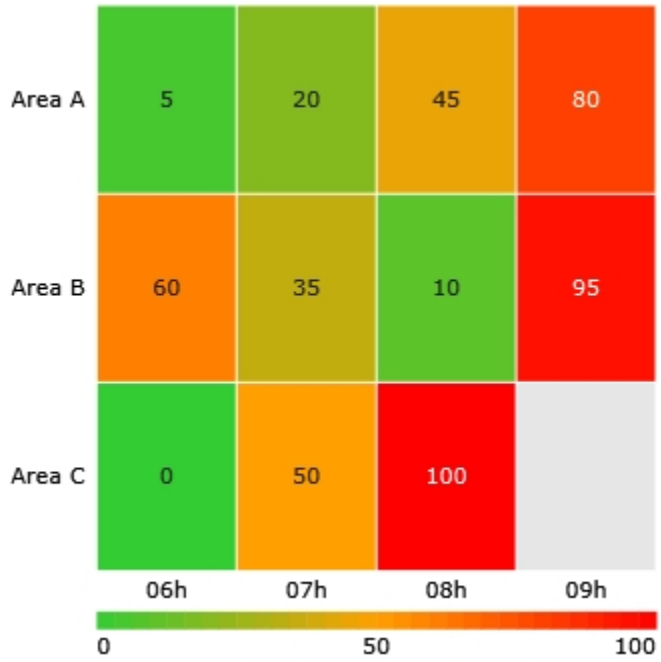
Alarm activity by area and hour. Tag mode with twelve cells, three rows (Area A, Area B, Area C) and four columns (06h to 09h), **ShowValues** set to true:

Row	06h	07h	08h	09h
Area A	5	20	45	80
Area B	60	35	10	95
Area C	0	50	100	(not a number)

The cells go from green (0) through amber (50) to red (100), the legend shows 0, 50 and 100, and the Area C / 09h cell, which has no numeric value, is drawn in the no-data grey.

Runtime Execution

At runtime the HeatMapChart redraws when the bound values or the table change, and follows the Display theme. The image shows the example above in the Rich Client; the web client draws the same grid.



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