User Controls

This section discusses how to configure various types of displays that present data.

In this section...

Configuring a Circular Panel

Double-click any Circular Panel object in the display, or use the left panel PieChart to configure it.

Circular Panel configuration	
Field	**Description**
Control Name	Defines a name for the control, so it can be accessed in the CodeBehind script. See Displays Code Behind.
Selected Value	Select an object to represent the selected value
SelectedIndex	Select an object to represent the selected index
ImageSize	Size of the selected image
FontSize	Size of the font used on the component
Columns	For each value that you want to include, select a section and configure the settings to the right of the list (described below). The panel displays a section for each column.
FieldName	Name of the field to be used
Title	Name to be shown on the component
Image	Select a resource image to display.
Preview	Read-only display of selected image.

Configuring a PieChart

Double-click any PieChart object in the display to configure it.

Pie Chart configuration	
Field	**Description**
Control Name	Defines a name for the control, so it can be accessed in the CodeBehind script. See Displays Code Behind
ChartType	Select the type of chart: Percent, Angles, or Section
Data Items	For each value that you want to include, select a section and configure the settings to the right of the list (described below). The chart displays a section for each data item.
FieldName	Enter a name for the data item.
LinkedValue	Enter a tag name as the data source for the data item.
Brush	Click to select the color for the data item.

Configuring a BarChart

Double-click any BarChart object in the display to configure it.

Bar Chart configuration	
Field	**Description**
Control Name	Defines a name for the control, so it can be accessed in the CodeBehind script. See "Displays Code Behind" on page 129.
Type	Select the type of chart.
Data Source	Enter the dataset table or query to use for the chart.
Grid Lines	Click to select the color for the grid lines.
Window	Click to select the color for the window background.
Labels	Click to select the color for the labels.
Show Horizontal Labels 45°	Select to angle the labels below each bar at 45°.
Show value over bar	Select to display the bar value above the bar.
Hide all Zero Series	Set the series that has values 0 to be hidden
Show value labels 90°	Select to show the labels on each bar at 90°.
Y Axis Range	Set the range of the Y axis (from and to)
Y Axis Height	Set the Height of the Y axis
Y Axis Labels	Set the quantity of the labels to show on Y axis
Auto Scale Y Axis	Set to make the Y axis auto scalable
Format	Set the format of the Y axis values
Data Items	For each column in the data source that you want to include, select a bar and configure the settings to the right of the list (described below). The chart displays a bar for each row.
FieldTitle	Title to be show in the display to the current column
FieldValue	Name of the column in the database.
Min.	Enter a tag to define the minimum value.
Max.	Enter a tag to define the maximum value.
Brush	Click to select the color for the data item.

Configuring an Alarm Window

Double-click any Alarm window object in the display to configure it.

Alarm window configuration	
Field	**Description**
Control Name	Defines a name for the control, so it can be accessed in the CodeBehind script. See Displays Code Behind.
MaxLines	Maximum number of lines to display in the window.
List	Select the type of alarms to display in the window: • OnlineAlarms—Displays only active alarms. Alarms only display while the alarm is in the alarm state. • AlarmHistory—Displays only past alarms. • AuditTrail—Displays only the SystemEvents (**Edit > Alarms > Groups**). • AlarmHistory+Events—Displays past alarms and SystemEvents.
Merge Hi and HiHi Lines	Combines alarms configured as Hi and HiHi into a single row.
History Interval/To	Enter the start and end dates for the alarms.

Show Column Titles	Select to display the column titles.
Ack by Page	Enter a tag name, which when triggered, acknowledges the alarms in the alarm window.
Show Header	Enter text to display above the column titles.
AllowSort	Select to let users sort the data by column.
Allow Column Reorder	Select to let users change the order of the columns.
Display value column as string	Set the format of the value column to string
Filter	Enter SQL statement to limit the alarms displayed.
Display Millisecond	Select to include milliseconds in the alarm time.
Ack Selected Line	Configure settings for acknowledging an alarm.
Columns	For each column in the list, select the column and configure the settings to the right of the list (described below).
Visible	Select for column to display in the alarm window.
Allow Filter	Select to let users filter the column.
Show in Column Chooser	Select to include the column in the column chooser, which lets users select the columns to display.
Title	Enter the text for the column title.
Width	Enter the initial column width, in WPF units (device-independent pixels).
Sort	Select how to initially sort the column.

Configuring the Trend Window

The drawing tool has two trend objects, the TrendChart and the TrendChartLegacy. The TrendChart is the newest that should be used by default, the other was kept to ensure compatibility with projects created in previous release, the iOS displays are using the previous object.

Double-click any Trend window object in the display to configure it.

Trend window settings	
Field	**Description**
Control Name	Defines a name for the control, so it can be accessed in the CodeBehind script. See Displays Code Behind.
Bind to Tag	Enter with an object property where the Trend configuration will be saved.
Bind Pens to Tag	Enter with an object property where the Pen values will be saved.
Orientation	- Horizontal. - Vertical, top to bottom. - Vertical, bottom to top.
Window	Set the trend control background color.
Labels	Set the color of the trend control labels.
Grid Lines	Set the color of the Grid lines
Grid Lines Stroke	Set the Grid line settings.
Cursor	Enables (selected) or disables (deselected) the cursor settings.

Y Axis	- Y scale for each pen - Based on min and max of each pen. - Y range - Defines the minimum and maximum values for the Y-axis - The format of the values in the Y-axis. For valid numeric formats, see "Tag Formats" on page 66. For example, N1 (number with 1 decimal place). - Stack Y scales - Check to stack similar Y scales. - Merge similar Y Scales - Check to merge the similar Y scales.
X Axis	- Duration - Define the X-axis time span. - XY Chart - Check to define a X axis range - Labels - Define the quantity of horizontal grid lines. - The X-axis format is defined by two fields: first line format and second line format. This is especially useful to define label marks that require two lines of information. For valid date and time formats, see Tag Formats. For example, T (Time) for the first line format, d (short date) for the second line format. - Navigation Control - Check to make navigation controls visible
Legend	Defines the position of the legends in the Trend Window. - None. - Top Left. - Top Right. - Bottom Left. - Right Panel. - Bottom Panel.
Pens	
Tag	Set tag that will provide the value for the pen.
Pen Settings	Set the configuration of the Line color, Line stroke, Fill area and the type of Marker.
MinValue	Linear scale reference for the tag value, according to the Y-axis range.
MaxValue	Linear scale reference for the tag value, according to the Y-axis range.
Auto	Set the value to auto, instead use MinValue and MaxValue
SPCEna ble	Enable or disable the SPC settings.
SPCSett ings	Click to open the SPC settings.
Show Value Area	Fill the pen area with the specified color
PenLab el	Set the pen name.
Filter level	An integer number that "group" points on XY axis, calculating the average between then.
LimitMin MaxValue	Remove the points less than Tag.Min and greater than Tag.Max.
Square	Fill the pen points with a square wave.

Double-click any Trend window legacy object in the display to configure it.

Trend window legacy settings	
Field	**Description**
Control Name	Defines a name for the control, so it can be accessed in the CodeBehind script. See Displays Code Behind.
0(online) 1 (history)	0 - the control shows the online data. 1 - the control shows the history data. For example: Tag.onLineHist.

OnlineTrigger	The refresh rate of the online trend control. For example, 00:00:01 or {Tag.trendTimeSpan}.
Time Before Now	
HistoryDateTime	The initial point for the history trend control. For example, {Tag.initialTrendHistory}.
Grid Line	Set the color of the Grid lines
Window	Set the trend control background color.
Labels	Set the color of the trend control labels.
Off line Marker	Set the marker when the trend is in off line mode
Cursor Enable	Enables (selected) or disables (deselected) the vertical cursor.
Pens Legend	Defines the position of the pens legend in the trend control.
Y Axis	
Range	Defines the minimum and maximum values for the Y-axis.
Labels	Defines the quantity of horizontal grid lines.
Format	The format of the values in the Y-axis. For valid numeric formats, see Tag Formats. For example, N1 (number with 1 decimal place).
X Axis	
Interval	Defines the X-axis time span.
Labels	Defines the quantity of horizontal grid lines.
Format	The X-axis format is defined by two fields: first line format and second line format. This is especially useful to define label marks that require two lines of information. For valid date and time formats, see Tag Formats. For example, T (Time) for the first line format, d (short date) for the second line format.
Pens	
Visible	Shows (1) or hides (0) the selected pen. Ex 1 or {showPen1}.
Tag	Set tag that will provide the value for the pen.
Min	Linear scale reference for the tag value, according to the Y-axis range.
Max	Linear scale reference for the tag value, according to the Y-axis range.
Pen	Choose the style, the color, and the thickness of the pen line.
CursorValue	Set the tag that will receive the real value of the Y-axis, according to the cursor position. For example: Tag.pen1CursorValue.
FieldName	Set the pen name.
SPC	Check to enable SPC
MouseActions	Check to enable mouse actions on trend
Tooltips	Check to enable tool tip on hover
Allow edit pens/labels	Check to enable allow the pens and labels to be edited
Y scale for each pen	Y scale for each pen based on min and max of each pen.
Merge same Y scale	Check to merge the similar Y scales.

Using Y Axis Scaling

Considering:

Y-axis Min = 0;

Y-axis Max = 100;

The trend control allows many pens to be displayed together. When your pens do not have the same range, you can use the tips below to fit your data in the same chart, for better visualization:

- If a pen has a lower range, 0 to 1 for example, you can set the Max property of the pen to 1, so when the real tag value is 1, the value 100 will be displayed in the chart. (100/1 scale).
- If a pen has a higher range, 0 to 1000 for example, you can set the Max property of the pen to 1000, so when the real tag value is 1000, the value 100 will be displayed in the chart. (1/10 scale).

Configuring a DataGrid Window

Double-click any DataGrid window object in the display to configure it.

Data Grid window configuration	
Field	**Description**
Control Name	Defines a name for the control, so it can be accessed in the code-behind script. See Displays Code Behind
Data Source	Enter the dataset table or query to use for the window.
SelectedValues	Enter a string tag or array tag to receive the contents of the selected row.
SelectedIndex	Enter a tag to receive the number of the currently selected row. Row numbering starts with 0.
LinesCount	Select a tag to receive the number of lines in the window.
Pause	Set an object to defines if the datagrid will be updated or not when the data changes.
Theme	Select the theme for the window.
BindindMode	Select the binding mode to use. See http://msdn.microsoft.com/en-us/library/system.windows.data.bindingmode.aspx.
AllowInsert	Select to let users add rows.
Column Titles	Select to display column titles.
Transpose	Select to transpose columns to rows
OneClick Edit	Select to edit cells on first click
Allow Delete	Select to allow delete data from grid
AllowSort	Select to let users sort the data by column.
Auto Column	- Select to have the system automatically include all table or query columns in the window. If selected, you do not have to configure the columns below. To customize specific columns, add the column to the column list and configure the settings to the right (described below). - Deselect to manually configure each column that you want to include using the Columns list and settings to the right (described below).
Multiple Selection	Check to make multiple selection possible
Edit SelectedValues	Check to make it possible to edit multiple selected values
Show Header	Check to show headers on grid
Filter	Enter SQL statement to limit the data displayed.
Columns	For each column you want to customize or include manually, add the column and configure the settings to the right of the list (described below).

Visible	Select to allow the column to display in the data grid window.
Editable	Select to let users edit the column.
Show in Column Chooser	Select to include the column in the column chooser, which lets users select the columns to display.
FieldName	Enter a name for the column.
Editor	Select the column data type.
Title	Enter the text for the column header.
Width	Enter the initial column width, in WPF units (device-independent pixels; one WPF = 1/96 inch).
Sort	Select how to initially sort the column.