



HiGV Labels

User Guide

Issue	00B02
Date	2016-01-06

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About This Document

Purpose

This document is attached to the *HiGV Development Guide*. It describes the definitions of XML file label attributes in the HiGV.

Intended Audience

This document is intended for:

- Technical support engineers
- Software development engineers

Change History

Changes between document issues are cumulative. Therefore, the latest document issue contains all changes made in previous issues.

Issue 00B02 (2016-01-06)

This issue is the second draft release, which incorporates the following changes:

Tables 1-4, 1-10, and 1-42 are modified.

Issue 00B01 (2015-08-18)

This issue is the first draft release.



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1 Control Labels

1.1 View

Table 1-1 Attributes of the View

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
id	View ID	Character string	Yes	-	The ID of the view must be the same as that of the main window of the view. It is an input parameter for HI_GV_PARSER_LoadViewByID.
onload	Processing function before a view is loaded	-	No	-	This attribute is reserved to comply with other languages and is not required in the C language version.
unload	Processing function after a view is unloaded	-	No	-	This attribute is reserved to comply with other languages and is not required in the C language version.



NOTE

As the ID of the GUI description XML file, the view has no actual meaning as GUI data and no view instance is generated.



1.2 Control

Table 1-2 Public attributes of the control

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
id	ID of a control	Character string	Yes	-	Control handle
top	Vertical offset of a control relative to the upper left corner of the parent control	Positive integer and 0	Yes	0	Unit: pixel
left	Horizontal offset of a control relative to the upper left corner of the parent control	Positive integer and 0	Yes	0	
width	Control width	Positive integer	Yes	-	
height	Control height	Positive integer	Yes	-	
transparent	Transparency	Yes: transparent No: opaque	No	No	If a control is transparent, the control skin is not drawn. If the control has a parent container, the parent container is instructed to draw the skin of the transparent region.
isrelease	Whether to release resources when the control is hidden	Yes: release No: not release	No	No	-
isnofocus	Whether a control is forbidden to be focused	Yes: The control is not allowed to be focused. No: The control is allowed to be focused.	No	No	This attribute is valid for controls that can be focused by default.
islanguage	Whether a control responds to a language-switch event during language environment switch	Yes: respond No: not respond	No	No	HIGV_MSG_LAN_CHANGE message events
iswinmodal	Whether a control is a modal window	Yes: a modal window No: not a modal window	No	No	The modal window that displays and obtains a focus is unable to transfer the focus to the non-modal window before the window



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
					is hidden. This attribute is used in the pop-up boxes controlled by the mouse.
isskinforce draw	Whether to forcibly refresh the parent background for the non-transparent style	Yes: refresh No: not refresh	No	No	When a control is redrawn, the parent container background in the refreshed area is redrawn first. This attribute is used for the controls that use the transparent or semitransparent images and the transparent attribute of the controls are no . This attribute is invalid for the window.
ishilightall child	Whether to highlight all child controls when the group is highlighted	Yes/No	No	No	-
normalskin	Skin in the normal state	Valid skin ID	Yes	-	Skin of a control in the normal state
disableskin	Skin in the disabled state	Valid skin ID	No	-	Skin of a control in the disabled state
highlightskin	Skin in the highlighted state	Valid skin ID	No	-	Skin of a control in the highlighted state
activeskin	Skin in the active state	Valid skin ID	No	-	Skin of a control in the active state
mousedown nskin	Skin when the control is being clicked	Valid skin ID	No	-	Skin of a control when it is being clicked
leftorderobj	Left brother control	Valid brother control ID	No	-	These attributes are used or controls to which the focus can be switched by pressing the arrow keys in the same parent container.
rightorderobj	Right brother control	Valid brother control ID	No	-	
uporderobj	Upper brother control	Valid brother control ID	No	-	
downorderobj	Lower brother control	Valid brother control ID	No	-	
widgetpos mirror	Whether to mirror the control position when a right-to-left language is used	Yes: mirror No: not mirror	No	No	Mirroring during the switchover between the RTL and LTR languages



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
widgetint riormirror	Whether to mirror the control content when a right-to-left language is used	Yes: mirror No: not mirror	No	No	Mirroring during the switchover between the RTL and LTR languages
font	Text font	Valid font ID	No	-	-
text	Text content	Multi-language character string ID	No	-	Valid for controls containing text content
alignment	Content alignment mode	Horizontal: left, right, hcenter, forceleft, or forcerright Vertical: top, bottom, or vcenter Auto wrap: wrap Ellipsis: wordellipsis	No	hcenter vcenter	The four alignment modes are separated by " ", for example left top wrap wordellipsis; hcenter vcenter You can use three " " at most. force indicates forcible alignment, which is not affected by the switchover of language environments.
focusmode	Focus mode	Auto/Manual	No	auto	auto indicates that you operate or edit a control directly. manual indicates that you need to press ENTER to enter/exit the operating status.

Table 1-3 Public event functions for the control

Function	Triggering Event	Mandatory	Remarks
onkeydown	The key is pressed.	No	-
onkeyup	The key is released.	No	-
ontimer	The timer is triggered.	No	-
ongetfocus	The control is focused.	No	-
onlostfocus	The control is unfocused.	No	-
onmousein	The pointer is moved in.	No	-
onmousedown	The mouse button is	No	-



Function	Triggering Event	Mandatory	Remarks
	clicked.		
onmouseout	The pointer is moved out.	No	-
onmouseup	The mouse button is released.	No	-
onmousemove	The mouse is moved.	No	-
onmousewheel	The mouse wheel is scrolled.	No	-
onmousedown	The mouse is double-clicked.	No	-
onfocusout	The manual focus mode is exited.	No	This function is valid when the manual focus mode is used. The HIGV_PROC_STOP value returned by the function indicates the editing state, and HIGV_PROC_GOON indicates the focus switching state.
onlanguagechange	The language is changed.	No	-

1.3 Window

Table 1-4 Private attributes of the window

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
opacity	Transparency of a window	0–255	No	255	A smaller value indicates greater transparency. This attribute applies only to the non-sharing mode.
winlevel	Z order of a window	0–15	No	0	During window overlapping, the window with a higher Z order is displayed with priority.
colorkey	Colorkey of a window	Color values	No	-	This attribute covers the colorkey of the entire window, including its controls. The area with the colorkey can pass through the graphic layer.
layer	Layer to which a window belongs	Valid layer	No	Default layer	This attribute is provided for the module with multiple layers (for details about the usage of multiple layers, see the <i>HiGV Development Guide</i>). If multiple layers are configured, the window is cloned at the



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
					<p>corresponding layer. For example: layer="LAYER_0;LAYER_1;LAYER_2"</p> <p>Note that this attribute specifies the layer to which the window belongs. If the layer to which the window belongs is not configured, the global layer is used or cloned.</p> <p>The global layer is set by using the xml2bin option. For example: xml2bin -L "LAYER_0;LAYER_1;LAYER_2"</p> <p>A maximum of three layers are supported.</p>
pixelformat	Pixel format of a window	Pixel format type	No	Pixel format of the layer	<p>Supported pixel formats: clut8, clut1, clut4, argb4444, argb0444, argb1555, argb0555, rgb565, argb8565, argb8888, and argb0888</p> <p>It is recommended that the argb8888 or argb1555 format be used.</p>
isnotclone	Never clone the window forcibly	Yes/No	No	No	This attribute is used to set windows that do not need to be cloned, such as windows related to the input method (soft keyboard and input method switchover window).

Table 1-5 Private event functions for the window

Function	Triggering Event	Mandatory	Remarks
onevent	User-defined event HIGV_MSG_EVENT	No	-
onshow	Before the window is displayed	No	-
onrefresh	After the window is drawn	No	-
onhide	After the window is hidden	No	-



1.4 Button

Table 1-6 Private attributes of the button

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
style	Button style	Check: check box Radio: radio box Normal: common button Switch: switch button Toggle: toggle button	No	Normal	You can select or deselect the check box and radio box, and enable or disable the switch button and toggle button.
checkednormal	ID of the normal-state skin when the button is selected	Valid skin ID	No	-	Normal-state skin when a button is selected or enabled
checkeddisable	ID of the disabled-state skin when a button is selected	Valid skin ID	No	-	Disabled-state skin when a button is selected or enabled
checkedhighlight	ID of the highlighted-state skin when a button is selected	Valid skin ID	No	-	Highlighted-state skin when a button is selected or enabled
checkedactive	ID of the active-state skin when a button is selected	Valid skin ID	No	-	Active-state skin when a button is selected or enabled
checkedmouse-down	ID of the skin when the button is being selected and clicked	Valid skin ID	No	-	Skin of the button when it is selected or enabled and is being clicked
leftmargin	Left margin	Positive integer and 0	No	0	Spacing between the text drawing area and the control boundary Unit: pixel
rightmargin	Right margin	Positive integer and 0	No	0	
topmargin	Top margin	Positive integer and 0	No	0	



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
bottommargin	Bottom margin	Positive integer and 0	No	0	
texton	Text when a button is enabled	Multi-language character string ID	No	-	Valid for the switch and toggle buttons
textoff	Text when a button is disabled	Multi-language character string ID	No	-	Valid for the switch and toggle buttons
switchlayout	Switch layout	"off:on", "on:off"	No	off:on	Valid for the switch buttons
toggleoncolor	Color of the indicator when a button is enabled	Color value	No	-	Valid for the toggle buttons. The color is not filled if this attribute is not set.
toggleoffcolor	Color of the indicator when a button is disabled	Color value	No	-	Valid for the toggle buttons. The color is not filled if this attribute is not set.

Table 1-7 Private event functions for the button

Function	Triggering Event	Mandatory	Remarks
onclick	The button is clicked and released.	No	-
onstatuschange	The status of the check box is switched.	No	-

1.5 Label

This control has no special attribute currently.



1.6 Progress Bar

Table 1-8 Private attributes of the progress bar

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
step	Step	rangemax–rangemin	No	1	-
rangemax	Maximum value	Positive integer	Yes	-	-
rangemin	Minimum value	Positive integer and 0	Yes	-	-
fillskin	Skin of the progress	Valid skin ID	No	-	-
isvertical	Whether the progress bar is vertical	Yes: vertical No: horizontal	No	No	-

Table 1-9 Private event functions for the progress bar

Function	Triggering Event	Mandatory	Remarks
onselect	The progress is changed.	No	-

1.7 Edit

Table 1-10 Private attributes of the edit

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
maskchar	Mask content	Character string	No	-	When ismask is yes, you must set the mask format, such as ###.##MHZ (# stands for characters to be entered).
maxlength	Maximum character length	Positive integer	No	-	Valid when ismask is no
beforecipherchar	Characters displayed before the password is entered	Character	No	'\0'	Valid when ispassword is yes
aftercipher	Characters	Character	No	'*'	



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
char	displayed after the password is entered				
cursorpos	Initial cursor position	Positive integer and 0	No	0	-
isdigit	Digits only or not	Yes/No	No	No	No cursor position in the end when the number of input digit style characters reaches the upper limit
ispassword	Whether it is a password box	Yes/No	No	No	-
iscursorcycle	Whether the cursor is cyclic	Yes/No	No	No	Whether the cursor jumps to the other end when it reaches the boundary and is moved continuously
ismask	Mask format or not	Yes/No	No	No	-
isreadonly	Read-only or not	Yes/No	No	No	-
isdel	Whether input characters can be deleted by HIGV_KEY_LEFT	Yes/No	No	No	-
inputmethodtype	Supported input method types	Supported input method types: pinyin: Chinese in pinyin symbol: symbol english: letters capenglish: upper-case letters number: digit standard_a: standard A standard_b: standard B	No	All input method types are supported by default.	For example, if this attribute is set to pinyin symbol number , the pinyin, symbol, and digit input methods are supported. This attribute is used to specify the local input method of the control. You can specify the global input method by calling the interface. The english, capenglish, and symbol are the old version input methods with simple functions, and are not recommended.



Table 1-11 Private event functions for the edit

Function	Triggering Event	Mandatory	Remarks
oninput	The password is entered.	No	This event is generated when the input reaches the maximum if the content length of the Edit is restricted.

1.8 Spin

Table 1-12 Private attributes of the spin

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
type	Control type	digital: digital type string: enumeration type binddb: bound DB type	No	digital	The configuration method for the value range of this attribute varies according to the spin type. For the digital type, rangemin , step , and itemnum must be configured. For the string type, arrayvalue must be configured. For the binddb type, datamodel must be configured.
datamodel	ID of the bound data model	Valid data model ID	No	-	-
rangemin	Minimum digital value	Positive integer and 0	No	0	These attributes are valid when type is digital . The spin value starts from rangemin , increases by a step at a time, and has a total quantity of itemnum .
step	Step	Positive integer	No	1	
itemnum	Number of data items	Positive integer	No	0	
arrayvalue	Spin value range	Multi-language character string ID	No	-	This parameter is valid when type is string . The semicolon ";" is used to separate character string IDs. For example, value1;value2;value3 indicates data items value 1, value 2, and value 3.
uparrownor maling	Image for the up arrow in normal state	Images	Yes	-	Image: image file path+image file name



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
uparrowmouseonimg	Image for the up arrow when the pointer moves to the arrow	Images	No	-	
uparrowpressimg	Image for the up arrow when it is being clicked	Images	No	-	
downarrownormalimg	Image for the down arrow in normal state	Images	Yes	-	
downarrowmouseonimg	Image for the down arrow when the pointer moves to the arrow	Images	No	-	
downarrowpressimg	Image for the down arrow when it is being clicked	Images	No	-	

Table 1-13 Private event functions for the spin

Function	Triggering Event	Mandatory	Remarks
onselect	The index of the display item is changed.	No	-

1.9 Clock

Table 1-14 Private attributes of the clock

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
minunit	Display of the minimum time unit	second minute hour	No	minute	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
		day week month year			
dispmode	Display mode	text, format	No	text	When dispmode is text , the time is displayed by setting the control text; when dispmode is format , the time is displayed in the preset format. For details about the presetting, see the <i>HiGV Development Guide</i> .
cursorstype	Internal focus cursor type	image, color	No	color	Valid when dispmode is format
cursorimag	Internal focus cursor image	Valid image	No	-	Valid when cursorstype is image . Image: image file path+image file name
cursorcolor	Internal focus cursor color	Color value	No	0x0	Valid when cursorstype is color

Table 1-15 Private event functions for the Clock

Function	Triggering Event	Mandatory	Remarks
onfocusmove	The internal focus cursor is moved.	No	This event is triggered only when dispmode is format .
ontimeadjust	The date and time are changed manually.	No	This event is triggered only when dispmode is format .
ontimeupdate	The time is updated regularly.	No	-

1.10 List Box

Table 1-16 Private attributes of the list box

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
rownum	Number of displayed rows	Positive integer	Yes	-	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
colnum	Number of columns	Positive integer	Yes	-	-
datamodel	ID of the bound data model	Valid data model ID	No	-	-
rowselectskin	Skin of the list focus when the control is activated	Valid skin ID	Yes	-	-
rownormalskin	Skin of the list focus when the control is not activated	Valid skin ID	No	-	-
scrollbar	Bound scroll bar	Valid scroll bar ID	No	-	-
hlineheight	Height of the grid horizontal line	Positive integer and 0	No	0	-
hlinecolor	Color of the grid horizontal line	Color value	No	0x0	-
vlinewidth	Height of the grid vertical line	Positive integer and 0	No	0	-
vlinecolor	Color of the grid vertical line	Color value	No	0x0	-
ismousehighlight	Whether to highlight the item where the pointer is located	Yes/No	No	No	-
scroll	Whether to display the text in scrolling mode when the text length exceeds the cell	Yes/No	No	No	-
fromleft	Scrolling direction for the text to be displayed in scrolling mode in a cell	Yes: from left to right No: from right to left	No	No	Valid when scroll is yes
step	Scrolling step	Positive integer	No	10	Valid when scroll is yes Unit: pixel
timeinterval	Scrolling time interval	Positive integer	No	100	Valid when scroll is yes Unit: ms
noframe	Whether to frame the grid	Yes: The grid is not framed. No: The grid is framed.	No	No	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
iscellactive	Whether to use the cell focus mode	Yes: cell focus mode No: item focus mode	No	No	-
cyc	Whether the internal focus is cyclic	Yes: cyclic No: non-cyclic	No	Yes	This attribute specifies whether the internal focus jumps to the other end when it moves to the edge of one end and still being clicked to move to the edge.
getwidthcb	Function for setting the cell width in cell focus mode	0–100	No	-	Valid when iscellactive is yes . The return value of the callback function is the percentage of the cell width to the total width of the control.
autoswitch cell	Whether the selected cell is automatically switched in cell focus mode	Yes: The cell is automatically switched and selected. No: Users need to switch and select the cell over the interface.	No	No	Valid when iscellactive is yes
scrollcol	Column that can be scrolled in item focus mode	Column index	No	No	Valid when iscellactive is no

Table 1-17 Private event functions for the list box

Function	Triggering Event	Mandatory	Remarks
onselect	Internal focuses are switched over.	No	-
oncellselect	The internal focus is pressed.	No	-
ondatachange	The data is updated.	No	-



Table 1-18 Private attributes of the ListCol

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
coltype	Column type	text image texticonleft texticonright	No	text	This attribute supports four column types, including text column, image column, small icon (left)+text, and small icon (right)+text.
colwidth	Column width	Positive integer and 0	Yes	-	The column is hidden when the value is 0. The total width of all columns cannot be greater than the width of the list control.
colbinddb	Whether data comes from the data model	Yes/No	Yes	No	-
coldbindex	Column number in the data model	Positive integer and 0. The DB index bound to the text and icon is expressed in a b when the column type is texticon , where a is the text and b is the icon.	No	-	This attribute needs to be specified when colbinddb is yes .
coldataconv	Data conversion function	Function expressed by character strings	No	-	This attribute is used to convert the original data into the required format for display.
colalignment	Alignment mode of the column content	The four alignment modes are separated by " ". Horizontal: left, right, or hcenter Vertical: top, bottom, or vcenter Auto wrap: wrap Ellipsis: wordellipsis At most three " " can be used, for example, left top wrap wordellipsis.	No	hcenter vcenter	-
colimage	Image	Valid image	No	-	This attribute is valid when



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
	content				type is image .
fgidx	Column text color	Color value	No	-	The foreground color of the focus skin has a higher priority than the column text color.

1.11 Scroll Bar

Table 1-19 Private attributes of the scroll bar

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
slidres	Slider skin	Valid skin ID	Yes	-	The offset of the slider depends on the image height of ltopidx on the upper left corner of the skin.
sliddirect	Scrolling direction	horizon: horizontal vertical: vertical	No	vertical	-
uparrownormal	Image for the up arrow in normal state	Valid image	No	-	Image: image file path+image file name The horizon scroll bar has the left and right arrows.
downarrownormal	Image for the down arrow in normal state		No	-	
uparrowpress	Image for the up arrow when it is being clicked		No	-	
downarrowpress	Image for the down arrow when it is being clicked		No	-	

1.12 Image

Table 1-20 Private attribute of the Image

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
image	Image	Valid image	Yes	-	Image: image file path+image



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
					file name

1.13 ImageEx

Table 1-21 Private attributes of the ImageEx

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
image	Image	Valid image	Yes	-	Image: image file path+image file name
interval	Frame switch interval	Positive integer	No	0	Valid when a dynamic GIF image is displayed Unit: ms
postype	Image display mode	Stretch: automatically scaled Autostretch: automatically scaled in proportion Center: automatically centered	No	center	-

1.14 TimeTrack

Table 1-22 Private attributes of the time track

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
normalthumbfile	Image for the slider in normal state	Valid image	Yes	-	Image: image file path+image file name
activethumbfile	Image for the slider in active state	Valid image	No	-	
mousedownthumbfile	Image for the slider when it is being	Valid image	No	-	



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
	clicked				
unitlong	Time scale	Positive integer	No	0	Unit: second
unitnumber	Number of scales	Positive integer	No	0	-
displayformat	Display format	year: year month: month day: day hour: hour minute: minute second: second yearmonth: year and month monthday: month and day hourminute: hour and minute yearmonthday: year, month, and day hourminutesecond: hour, minute, and second week: week	No	second	-
displayinterval	Scale display interval	Positive integer	No	0	This attribute specifies the number of intervals at which the time scale is displayed. The unit is the minimum scale.
isdisplayfirstunit	Whether to display the first scale	Yes: The first scale is displayed. No: The first scale is not displayed.	No	No	-
starttime	Start time	Valid time value	No	0	-
currentunit	Initial scale	Positive integer and 0	No	0	-
unitdisplayxoffset	Offset of the scale display position x	Positive integer and 0	No	0	Offset relative to the center of scales
unitdisplayyoffset	Offset of the scale display position y	Positive integer and 0	No	0	Offset relative to the center of scales



Table 1-23 Private event functions for the time track

Function	Triggering Event	Mandatory	Remarks
ondragbegin	The drag starts.	No	-
ondragend	The drag ends.	No	-
onselect	The current scale changes.	No	-

1.15 Scroll Text

Table 1-24 Private attributes of the scroll text

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
alwaysscroll	Whether to scroll the text cyclically	Yes: The text is scrolled cyclically. No: The text is not scrolled cyclically.	No	Yes	This attribute is a reserved attribute and supports only cyclic scrolling.
timeinterval	Scrolling time interval	Positive integer	No	0	Unit: ms
direction	Scrolling direction	left: rolling to the left right: scrolling right	No	right	-
step	Scrolling step	Positive integer	No	0	Unit: pixel
status	Initial scrolling status	Yes: The initial status is scrolling. No: The initial status is stop.	No	No	-
image	Scrolling image	Valid image	No	-	Image: image file path+image file name
imagetop	Position of the scrolling image in the control	Positive integer and 0	No	0	Unit: pixel
imageleft					
texttop	Position of the scrolling text in the control				
textleft					



Table 1-25 Private event function for the scroll text

Function	Triggering Event	Mandatory	Remarks
onetimeover	A scrolling circle completes.	No	-

1.16 Scroll Grid

Table 1-26 Private attributes of the scroll grid

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
rownum	Number of rows	Positive integer	Yes	-	-
colnum	Number of columns	Positive integer	Yes	-	-
datamodel	ID of the bound data model	Valid data model ID	No	-	-
focusactive skin	Skin of the internal focus when the control is activated	Valid skin ID	Yes	-	-
focusnorms kin	Skin of the internal focus when the control is not activated	Valid skin ID	No	-	-
leftmargin	Content margin	Positive integer and 0	No	0	-
rightmargin					
topmargin					
bottommargin					
rowspace	Row spacing	Positive integer and 0	No	0	Unit: pixel
colspace	Column spacing	Positive integer and 0	No	0	Unit: pixel
itemdirection	Item scrolling direction	horizon: horizontal vertical: vertical	No	horizon	-
iteminterval	Item scrolling interval	Positive integer	Yes	0	Unit: ms



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
itemsteps	Item scrolling step	Positive integer	Yes	0	-
focusinterval	Focus scrolling interval	Positive integer	Yes	0	Unit: ms
focussteps	Focus scrolling step	Positive integer	Yes	0	-
isfocusatbg	Whether to draw the focus frame on the background or foreground	Yes: The focus frame is drawn on the background. No: The focus frame is drawn on the foreground.	No	No	-
focusanchor	Position of the focus anchor that triggers the scrolling of the item	Positive integer and 0	No	0	This attribute is the position of the focus anchor that triggers the scrolling of the item. This attribute specifies the position of the displayed page relative to the scrolling direction. The valid value range is [0, rownum – 1] for vertical scrolling and [0, colnum – 1] for horizontal scrolling.
imgdecindex	Image decoding index	Positive integer and 0	No	0	Image index ID. For JPEG images, the index ID of the main image is 0, and that of the thumbnail starts from 1. For GIF images, the index ID increases from 0 based on the storage sequence.
isdynamiceimg	Whether to decode images dynamically	Yes: Images are dynamically decoded while being displayed on the GUI. No: Images are decoded and then displayed.	No	No	For dynamic decoding, images are displayed while being decoded, which avoids long display delay due to the low decoding speed.



Table 1-27 Private event functions for the scroll grid

Function	Triggering Event	Mandatory	Remarks
onfocusmove	The focus frame is switched.	No	-
oncellcolselect	The cell attribute column is selected.	No	-
onfocusreachttop	The focus is moved to the top edge.	No	-
onfocusreachbtm	The focus is moved to the bottom edge.	No	-
onfocusreachleft	The focus is moved to the left edge.	No	-
onfocusreachright	The focus is moved to the right edge.	No	-
ondatachange	The data is updated.	No	-
ondecimgstart	Dynamic image decoding starts.	No	-
ondecimgfinish	Dynamic image decoding ends.	No	-

Table 1-28 Private attributes of the ScrollCol

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
colindex	Column ID	Positive integer and 0	Yes	-	The value must be less than the number of cell columns.
coltype	Column type	text image	No	text	-
coltop	Margin of the text or image relative to the cell	Positive integer and 0	No	-	The text or image is centered if these attributes are not set. Unit: pixel
colleft		Positive integer and 0	No	-	
colwidth	Column width	Positive integer and 0	Yes	-	The column is hidden when the value is 0. colleft plus colwidth of all columns cannot be greater than the cell width.
colheight	Column height	Positive integer and 0	Yes	-	The column is hidden when the value is 0. coltop plus colheight of all columns cannot be greater than the cell



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
					height.
colalignment	Alignment mode of the column content	Horizontal: left, right, or hcenter Vertical: top, bottom, or vcenter Auto wrap: wrap Ellipsis: wordellipsis	No	center	The size of the displayed content needs to be set according to the size of each cell. You can set this attribute to left , and then adjust the values of coltop and colleft to determine the display position.
colbinddb	Whether data comes from the data model	Yes/No	No	Yes	If this attribute is set to yes , you need to specify the value of coldbindex .
colimage	Image content	Valid image	No		Valid when type is image
coldataconv	Data conversion function	Function expressed by character strings	No	-	This attribute is used to convert the original data into the required format for display during drawing.

1.17 Scroll Box

Table 1-29 Private attributes of the scroll box

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
focusdispmode	Focus display mode	normalhomo: homogeneity mode normalhetero: heterogeneity mode scale: scaling mode	No	normalhomo	normalhomo: The display contents and forms of normal items are the same as those of the focus item. normalhetero: The display contents and forms of normal items are different from those of the focus item. scale: The normal items and the focus item can be scaled.
direction	Scrolling direction	horizon: horizontal vertical: vertical	No	horizon	If focusdispmode is normalhomo or normalhetero , this attribute must be set to horizon .



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
showitemnum	Number of displayed items	Positive integer	Yes	-	-
focusanchorindex	Position of the initial focus display anchor	Positive integer and 0	No	0	-
interval	Scrolling time interval	Positive integer	Yes	-	Unit: ms
steps	Scrolling step	Positive integer	No	0	Unit: pixel
texttop	Relative position of the text in the non-focus frame	Positive integer and 0	No	0	Invalid when focusdispmode is scale Unit: pixel
textleft		Positive integer and 0	No	0	
textwidth	Size of the text in the non-focus frame	Positive integer and 0	No	0	The text is hidden when the value is 0. Unit: pixel
textheight		Positive integer and 0	No	0	
imgtop	Relative position of the image in the non-focus frame	Positive integer and 0	No	0	Unit: pixel
imgleft		Positive integer and 0	No	0	
imgwidth	Size of the image in the non-focus frame	Positive integer and 0	No	0	The image is hidden when the value is 0. Unit: pixel
imgheight		Positive integer and 0	No	0	
focusrectskin	Skin of the focus frame	Valid image	No	-	Image: image file path+image file name
focusxtexttop	Relative position of the text in the focus frame	Positive integer and 0	No	0	These attributes are valid if focusdispmode is normalhetero . The value 0 indicates that the text or image is hidden. Unit: pixel
focusxtextleft		Positive integer and 0	No	0	
focusxtextwidth	Size of the text in the focus frame	Positive integer and 0	No	0	
focusxtextheight		Positive integer and 0	No	0	
focusimgtop	Relative	Positive integer	No	0	



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
p	position of the image in the focus frame	and 0			
focusingleft		Positive integer and 0	No	0	
focusimgwidth	Size of the image in the focus frame	Positive integer and 0	No	0	
focusimgheight		Positive integer and 0	No	0	
focusrectwidth	Focus frame size	Positive integer and 0	No	0	The focus frame size is the same as the normal frame size when these attributes are 0. These attributes are invalid when focusdispmode is normalhomo . Unit: pixel
focusrectheight		Positive integer and 0	No	0	
leftmargin	Margin	Positive integer and 0	No	0	Unit: pixel
rightmargin		Positive integer and 0	No	0	Unit: pixel
topmargin		Positive integer and 0	No	0	Unit: pixel
bottommargin		Positive integer and 0	No	0	Unit: pixel
space	Element spacing	Positive integer and 0	No	0	Unit: pixel

Table 1-30 Private event functions for the scroll box

Function	Triggering Event	Mandatory	Remarks
onfocusselect	The focus frame is switched.	No	-
onfocusclick	The focus frame is confirmed.	No	-



1.18 Combo Box

Table 1-31 Private attributes of the combo box

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
datamodel	ID of the bound data model	Valid data model ID	No	-	-
dbindex	Serial number of the bound data model	Positive integer and 0	No	0	-
type	Control type	string: enumeration type binddb: bound DB type	No	binddb	-
arrayvalue	Enumeration	Multi-language character string IDs separated by semicolons (;)	No	=	Valid when type is string
scrollbarwidth	Width of the scroll bar in the displayed box	Positive integer and 0	No	0	Unit: pixel
popboxheight	Height of the displayed box	Positive integer	Yes	-	Unit: pixel
row	Number of rows in the displayed box	Positive integer and 0	No	-	The number of rows is automatically calculated when 0 or the default value of this attribute is used.
listalign	Alignment mode of the list content	Same as the alignment mode of the list box	No	hcenter vcenter	-
popboxskin	Skin of the list box in the displayed box	Valid skin ID	No	-	-
scrollbarskin	Skin of the scroll bar in the displayed box	Valid skin ID	No	-	-
slideskin	Skin of the scroll bar slider in the displayed box	Valid skin ID	No	-	-
listrowselectskin	Skin of the selected row when the list is in focus state	Valid skin ID	Yes	-	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
listrownormal	Skin of the selected row when the list is not in focus state	Valid skin ID	No	-	-
sbuparrownormal	Image for the up arrow of the scroll bar in normal state	Valid image	No	-	Image: image file path+image file name
sbdowndownnormal	Image for the down arrow of the scroll bar in normal state		No	-	
sbuparrowpress	Image for the up arrow of the scroll bar when it is being clicked		No	-	
sbdowndownpress	Image for the down arrow of the scroll bar when it is being clicked		No	-	
arrownormalimg	Image for the drop-down arrow in normal state		No	-	
arrowmouseonimg	Image for the drop-down arrow when the pointer moves onto the arrow		No	-	
arrowpressimg	Image for the drop-down arrow when it is being clicked		No	-	

Table 1-32 Private event function for the combo box

Function	Triggering Event	Mandatory	Remarks
onitemselect	The item is selected.	No	-



1.19 Track Bar

Table 1-33 Private attributes of the track bar

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
normaltrack	Image for the slider in normal state	Valid image	No	-	Image: image file path+image file name
activetrack	Image for the slider in activated status		No	-	
mousedowntrack	Image for the slider when it is being clicked		No	-	
slider	Slider background		Yes	-	
leftmargin	Slider bar margin	Positive integer and 0	No	0	Unit: pixel
rightmargin		Positive integer and 0	No	0	Unit: pixel
topmargin		Positive integer and 0	No	0	Unit: pixel
bottommargin		Positive integer and 0	No	0	Unit: pixel
curvalue	Current value	Positive integer and 0	No	0	-
maxvalue	Maximum value	Positive integer	Yes	0	-
minvalue	Minimum value	Positive integer and 0	Yes	0	-
step	Step	Positive integer	Yes	0	-
style	Slider style	vertical: vertical horizon: horizontal	No	horizon	-

Table 1-34 Private event function for the track bar

Function	Triggering Event	Mandatory	Remarks
onvaluechange	The position of the slider is changed.	No	-



1.20 IPEdit

Table 1-35 Private attribute of the IpEdit

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
ipaddr	IP address	Positive integer	No	0	0xFFFFFFFF = 255.255.255.255 IPv4

1.21 Calendar

Table 1-36 Private attributes of the calendar

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
uparrownormalimg	Image for the up arrow in normal state	Valid image	No	-	Image: image file path+image file name
uparrowmouseonimg	Image for the up arrow when the pointer moves to the arrow		No	-	
uparrowpressimg	Image for the up arrow when it is being clicked		No	-	
downarrownormalimg	Image for the down arrow in normal state		No	-	
downarrowmouseonimg	Image for the down arrow when the pointer moves to the arrow		No	-	
downarrowpressimg	Image for the down arrow when it is being clicked		No	-	
insidenormalskin	Skin of child controls in normal state	Valid skin ID	No	-	-
insideactivateskin	Skin of child controls in activated state		No	-	-
insidehighlight	Skin of child		No	-	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
ightskin	controls in highlighted state				
highlightyear	Year in the highlighted date	Positive integer	Yes	-	-
highlightmonth	Month in the highlighted date	Positive integer	Yes	-	-
highlightday	Day in the highlighted date	Positive integer	Yes	-	-
highlightcolor	Color of the highlighted date	Color value	No	-	-
satcolor	Saturday color	Color value	No	-	-
suncolor	Sunday color	Color value	No	-	-
weekstartday	Beginning day of a week	Positive integer	Yes	-	-
weekstr	Multi-language character string of the week	Multi-language character string ID	Yes	-	Multi-language character strings of the week, separated by semicolons (;), such as STR_MONDAY;STR_TUSDAY;
monthstr	Multi-language character string of the month	Multi-language character string ID	Yes	-	Multi-language character strings of the month, separated by semicolons (;)

Table 1-37 Private event function for the calendar

Function	Triggering Event	Mandatory	Remarks
onselect	The date is changed.	No	-

1.22 Time Bar

Table 1-38 Private attributes of the time bar

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
marginleft	Left margin	Positive integer	No	-	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
		and 0			
marginright	Right margin	Positive integer and 0	No	-	-
displayformat	Scale display format	year, month, day, hour, minute, yearmonth, monthday, hourminute, yearmonthday, hourminutesecond, and week	No	second	-
displayinterval	Scale display interval	Positive integer	Yes	-	Unit: ms
unitdisplayxoffset	Horizontal coordinate offset of the scale display position relative to the scale center	Positive integer and 0	No	-	Unit: pixel
unitdisplayyoffset	Vertical coordinate offset of the scale display position relative to the scale center	Positive integer and 0	No	-	Unit: pixel
unitlong	Time duration of the minimum scale	Positive integer and 0	No	-	-
unitnumber	Number of scales	Positive integer	No	-	-
starttime	Start time	Character string	Yes	-	See the following example: Year–Month–Day Hour–Minute–Second
isdisplayfirstunit	Whether to display the first scale	Yes: The first scale is displayed. No: The first scale is not displayed.	No	No	-
timelinecnt	Number of time bars	Positive integer	Yes	-	-
timelineint	Interval of	Positive integer	Yes	-	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
erval	time bar				
curmousdownact	Action of the current time bar when it is being clicked	Positive integer and 0	No	0	0: There is no action. 1: The time bar moves to the position where the pointer is located. 2: The time bar moves one position unit toward the pointer.
beginmousedownact	Action of the start time bar when it is being clicked	Positive integer	No	0	
endmousdownact	Action of the end time bar when it is being clicked	Positive integer	No	0	
curnormalthumbfile	Image for the slider in normal state	Valid image	No	-	Image: image file path+image file name
curactivethumbfile	Image for the slider in active state		No	-	
curmousedownthumbfile	Image for the slider in the state of being clicked		No	-	
beginnormalthumbfile	Image for the slider entering the normal state		No	-	
beginactivethumbfile	Image for the slider entering the active state		No	-	
beginmousedownthumbfile	Image for the slider entering the state of being clicked		No	-	
endnormalthumbfile	Image for the slider exiting the normal state		No	-	
endactivethumbfile	Image for the slider exiting the activated state		No	-	
endmoused	Image for the		No	-	



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
ownthumbfile	slider exiting the state of being clicked				
currentunit	Current scale	Positive integer and 0	No	-	
beginunit	Start scale	Positive integer and 0	No	-	
endunit	End scale	Positive integer	No	-	
curflag	Whether to display the current scale	Yes: The scale is displayed. No: The scale is not displayed.	No	No	
beginflag	Whether to display the start scale		No	No	
endflag	Whether to display the end scale		No	No	

Table 1-39 Private event functions for the time bar

Function	Triggering Event	Mandatory	Remarks
ondragbegin	The drag starts.	No	-
ondragend	The drag ends.	No	-
onselect	The scale changes.	No	-

1.23 MsgBox

Table 1-40 Private attributes of the MsgBox

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
opacity	Transparency of a window	0–255	No	255	A smaller value indicates greater transparency. This attribute applies only to the non-sharing mode.
winlevel	Level of a window	0–15	No	0	When windows are overlaid, the higher-level window



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
					covers the lower-level window.
colorkey	Transparent color of a window	Integer	No	-	This attribute covers the transparent color of the entire window, including its controls. The area with transparent color can pass through the graphic layer.
layer	Layer to which a window belongs	Valid layer	No	Default layer	This attribute is the same as that of the Window .
pixelformat	Pixel format of a window	Pixel format type	No	Pixel format of the layer	Supported pixel formats: CLUT8, CLUT1, CLUT4, ARGB4444, ARGB0444, ARGB1555, ARGB0555, RGB565, ARGB8565, ARGB8888, and ARGB0888
isnotclone	Never clone the window forcibly	Yes/No	No	No	This attribute is used to set windows that do not need to be cloned, such as windows related to the input method (soft keyboard and input method switchover window).
style	Style	none, singleok, okcancel, retrycancel, abortretryignore, yesnocancel, and userdef	No	none	The none style has no button, the userdef style is user-defined, and other styles are listed based on the button sequence.
titleheight	Title bar height	Integer	No	0	No title bar is used if this attribute is 0. titleheight plus buttonareaheight cannot be greater than the height of the control. Unit: pixel
titletext	Title bar text	Multi-language character string ID	No	-	Valid when a title exists
titlealignment	Alignment mode of the content on the title bar	Horizontal: left, right, hcenter, forceleft, or forcerright Vertical: top, bottom, or vcenter	No	left vcenter	Valid when a title exists



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
		Auto wrap: wrap Ellipsis: wordellipsis			
titlefont	Font ID	Valid font ID	No	-	Valid when a title exists
titleskin	Title bar skin	Valid skin ID	No	-	This attribute is valid when a title exists. If this attribute is not set, the background skin is used.
buttoncount	Number of buttons	Positive integer and 0	No	-	This attribute is valid when style is userdef . The maximum number of buttons is four.
buttontext	Button text	Multi-language character string ID	No	-	Button text IDs are separated by semicolons (;). The number of the IDs should be equal to the button number.
buttonfont	Font ID	Valid font ID	No	-	-
buttonareaskin	Button area skin	Valid skin ID	No	-	-
buttonnormalskin	Skin of the button in normal state		No	-	-
buttonhighlightskin	Skin of the button in highlighted state		No	-	-
buttonactivation	Skin of the button in activated state		No	-	-
buttonmouse	Skin of the button when it is being clicked		No	-	-
buttonareaheight	Height of the button area	Positive integer and 0	No	0	titleheight plus buttonareaheight cannot be greater than the height of the control.
buttonheight	Button height	Positive integer and 0	No	0	buttonheight cannot be greater than buttonareaheight .



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
buttonwidth	Button width	Positive integer and 0	No	0	The total width of all buttons cannot be greater than the control width.
buttonlayout	Button layout	ok, cancel, abort, retry, ignore, yes, and no	No	-	This attribute is valid when style is userdef . It is used to set the button return IDs, which are separated by colons (:). The IDs correspond to MSG_BUTTONID_XX in the codes.
initfocusbuttonid	Initial focus button when the message box is displayed	Button return ID that has been set	No	First button on the left	-
showtimes	Display time (the message box is automatically hidden when this function is triggered)	Positive integer and 0	No	0	The message box is not automatically hidden when this attribute is set to 0. Unit: ms
icon	Icon in the left end of the title	Valid image	No	-	Image: image file path+image file name
leftmargin	Margin	Positive integer and 0	No	0	-
rightmargin		Positive integer and 0	No	0	-
topmargin		Positive integer and 0	No	0	-
bottommargin		Positive integer and 0	No	0	-

Table 1-41 Private event functions for the MsgBox

Function	Triggering Event	Mandatory	Remarks
onevent	The user-defined event HIGV_MSG_EVENT is generated.	No	-
onshow	Before the message box is displayed	No	-



Function	Triggering Event	Mandatory	Remarks
onrefresh	After the message box is drawn	No	-
onhide	After the message box is hidden	No	-
onselectbutton	The button is selected.	No	-
onautohide	The message box is hidden automatically.	No	-

1.24 MultiEdit

Table 1-42 Private attributes of the MultiEdit

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
charnum	Maximum number of characters	Positive integer and 0	No	0	If the value is 0, no character can be entered.
isreadonly	Read-only or not	Yes/No	No	No	The cursor is not drawn if this attribute is set to Yes .
issingleline	Single-line mode or not	Yes/No	No	No	-
charspace	Spacing between characters	Positive integer and 0	No	0	Unit: pixel
linespace	Spacing between line characters	Positive integer and 0	No	0	Unit: pixel
selectbgcol or	Background color of the selected text	Color value	No	0xFF0000 FF	-
selectfgcol or	Color of the selected text	Color value	No	0xFFFFFFFF FF	-
cursorcolor	Cursor color	Color value	No	0xFF0000 00	-
scrollbar	Bound scroll bar	Bound scroll bar	No	-	-
inputmethodtype	Supported input method	Supported input method	No	All input method types are	For example, if this attribute is set to pinyin symbol number , the pinyin, symbol, and digit



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
	types	types: pinyin: Chinese in pinyin symbol: symbol english: letters capenglish: upper-case letters number: digit standard_a: Standard A standard_b: Standard B		supported by default.	input methods are supported. This attribute is used to specify the local input method of the control. You can specify the global input method by calling the interface. The english, capenglish, and symbol are the old version input methods with simple functions, and are not recommended.

Table 1-43 Private event functions for the MultiEdit

Function	Triggering Event	Mandatory	Remarks
oninput	The input completes.	No	-
onselectend	The selecting ends.	No	-

1.25 Scroll View

Table 1-44 Private attributes of the scroll view

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
leftmargin	Margin of the view	Positive integer and 0	No	0	Unit: pixel
topmargin		Positive integer and 0	No	0	
rightmargin		Positive integer and 0	No	0	
bottommargin		Positive integer and 0	No	0	



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
		0			
verticalscrollbar	Bound vertical scroll bar	Valid scroll bar ID	No	-	-
horizontal scrollbar	Bound horizontal scroll bar	Valid scroll bar ID	No	-	-
step	Scrolling step	Positive integer	No	20	The scrolling step is also the minimum unit of the scroll bar.
interval	Scrolling time interval	Positive integer	No	200	The animation scroll view is not supported. Unit: ms
contentwidth	Fixed width of the control layout	Positive integer and 0	No	0	If the value is 0, the width is automatically adjusted based on the layout of child controls. The valid value must be greater than or equal to the control width.
contentheight	Fixed height of the control layout	Positive integer and 0	No	0	If the value is 0, the height is automatically adjusted based on the layout of child controls. The valid value must be greater than or equal to the control height.
alwayscenter	Whether the child control is automatically centered	Yes/No	No	Yes	This attribute applies only to the child control at the first layer.

Table 1-45 Private event function for the scroll view

Function	Triggering Event	Mandatory	Remarks
onviewmove	The view is moved.	No	-



2 Other Labels

2.1 Skin

Table 2-1 Skin attributes

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
id	Skin ID	Character string	Yes	-	-
type	Skin type	pic: image color: color	Yes	-	-
btmlineidx	Color or image of the bottom line	Color or image	-	-	<p>1. Image: image file path+image file name</p> <p>2. If the color type is used, you must specify the color value of each position.</p> <p>3. For the skin that consists of three horizontal images, ltopidx, toplineidx, and rtopidx must be specified.</p> <p>For the skin that consists of three vertical images, ltopidx, llineidx, and lbtmidx must be specified.</p>
toplineidx	Color or image of the top line		-	-	
llineidx	Color or image of the left line		-	-	
rlineidx	Color or image of the right line		-	-	
ltopidx	Color or image of the upper left corner		-	-	
lbtmidx	Color or image of the lower left corner		-	-	
rtopidx	Color or		-	-	



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
	image of the upper right corner				
rbtmidx	Color or image of the lower right corner		-	-	
bgidx	Color or image of the background		-	-	
isnodrawbg	Whether to fill the background color	Yes: The background color is not filled. No: The background color is filled.	No	No	Currently only the color type skin is supported if the background is not drawn to implement the focus frame effect. The width of the active focus frame must be the same as that of the normal focus frame.
linewidth	Width of the filled color	Positive integer and 0	No	2	Width of the color value of the color skin frame Unit: pixel

2.2 Font

Table 2-2 Font attributes

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
id	Font ID	Character string	Yes	-	-
sbnname	Preferred font library	Vector font library or dot-matrix font library	Yes	-	Valid fonts are generated only when at least one of the two attributes sbnname and mbname are yes. Font library: file path+file name
mbname	Candidate font library	Vector font library or dot-matrix font library		-	
size	Font size	Positive integer and 0	No	0	This attribute is valid only for vector fonts. The value 0 indicates the default size 22.



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
isbold	Bold or not	Yes: bold No: not bold	No	No	-
isitalic	Italic or not	Yes: italic No: not italic	No	No	-
isdefault	Whether the font is the default font	Yes/No	No	No	The system supports only one default font. If multiple fonts are set as default fonts, only the first one is used as the valid default font. If an interface is called to set the font, the font set by calling an interface is used as the default font.

2.3 Data Model

Table 2-3 Data model attributes

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
id	Data model ID	Character string	Yes	-	-
field	Field description	Character string	Yes	-	<p>This attribute describes all field information in the format of field name:type:length, and fields are separated by semicolons (;), for example RowID:u32:4;Name:string:32.</p> <p>The supported types include s8, u8, s16, u16, s32, u32, s64, u64, f32, d64, string, resid, and strid.</p> <p>Note that the length of types s8 to d64 must corresponds to that of the related machine types. If the lengths are not consistent, the system adopts the length of the machine type by force. For the string type, you are advised to align the fields in four-byte mode; otherwise, memory problems may occur on the data structure where the string type fields are used in the code because of byte alignment.</p>



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
datasource	Data source	owndb/userdb	No	owndb	The default data buffer of the HiGV is used when this attribute is owndb . A data buffer specified by the user is used when this attribute is userdb .
cacheroes	Number of cache rows	Positive integer and 0	No	0	This attribute is the default number of data cache rows when userdb synchronizes with the ADM.
getrowcount	Function for obtaining the total row count	Function expressed by character strings	No	-	This attribute is valid when datasource is userdb . You can obtain the total number of instant data by calling back this function when the ADM is synchronized.
getrowvalue	Function for obtaining row data	Function expressed by character strings	No	-	This attribute is valid when datasource is userdb . You can obtain the row data by calling back this function when the ADM is synchronized.
registerdatachange	Registration of the data model handle with the dependent user DB	Function expressed by character strings	No	-	This attribute is used to record the data model handle and notify it of data changes if there is any.
unregisterdatachange	Deregistration of the data model handle with the dependent user DB	Function expressed by character strings	No	-	-

2.4 Language

Table 2-4 Language attributes

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
id	Multi-language ID	Character string	Yes	-	The writing is id="language" .



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
languageinfo	Multi-language description	Character string	Yes	-	This attribute describes language type information in the format of language abbreviation:language. Different languages are separated by semicolons (;), for example, en:english;zh:chinese .
locale	Specified local language	Character string	Yes	-	This attribute is used to register one language as the local language. The local language strings cannot be blank, and are used to replace other language strings when the other language strings are blank.

Table 2-5 Lanstr attributes

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
id	Multi-language character string ID	Character string	Yes	-	This attribute specifies the multi-language character string IDs of a control.
zh/en/sk/tr/...	Language abbreviation	Character string	Yes	-	Multi-language character string See the following examples: de="Modus" en="Mode" Note that the language abbreviation needs to correspond to the language element attribute languageinfo . Each character string of the local language must be defined. Undefined character strings of non-local languages are automatically completed by using character strings of the local language.

Table 2-6 Strset attributes

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
id	ID of the multi-language	Character string	Yes	-	This attribute is a set of lanstr and is used for the clock control.



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
	character string group				
tt/mm/MM ...	Language abbreviation	Character string	Yes	-	Set of multi-language character string IDs See the following example: <strset id = "STRSET_AMPM" tt = "STRID_AMPM_AM;STRID_AMPM_PM;"> STRID_AMPM_AM and STRID_AMPM_PM are defined in the multi-language character string lanstr .

Table 2-7 Timefmt attributes

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
id	Time format ID	Character string	-{}-Yes	-	Definition of the time format See the following example:
zh/en/sk/tr/ ...	Text format of language environments	Character string	Yes	-	<timefmt id = "TIMEFMT_SHORT_TIME" en = "<tt> [h]:[m]:[s]" zh = "[H]:[m]:[s]" ar = "<tt> [h]:[m]:[s]"> The symbols <>, [], tt , h , m , and s are defined by the clock control. For details, see the xml definition of the clock control.