



HiGV Labels User Guide

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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.

Related Versions

The following table lists the product versions related to this document.

Product Name	Version
Hi3559A	V100
Hi3559C	V100
Hi3556A	V100
Hi3559	V200
Hi3556	V200
Hi3519A	V100
Hi3518E	V300
Hi3516D	V300
Hi3516C	V500

Intended Audience

This document is intended for:

- Technical support engineers
- Software development engineers



Change History

Changes between document issues are cumulative. The latest document issue contains all changes made in previous issues.

Issue 00B04 (2019-07-30)

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

In section 2.1, Table 2-1 is modified.

Issue 00B03 (2019-04-30)

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

In section 1.13, Table 1-21 is modified.

Issue 00B02 (2018-07-20)

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

Section 1.12 is modified.

Issue 00B01 (2018-05-24)

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	Yes	-	Control handle



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
		string			
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.
islanchange	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 is hidden. This attribute is used in the pop-up boxes controlled by the mouse.
isskinforcedraw	Whether to forcibly refresh the parent	Yes: refresh No: not refresh	No	No	When a control is redrawn, the parent container



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
	background for the non-transparent style				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 skin	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
widgetinterior mirror	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	-	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
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 forceright 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.
anim	Associated animation	Valid animation ID	No	-	The associated animation is started when the window is displayed.
reboundmax	Maximum rebound distance	Smaller than the control height (related to the control list direction)	-	-	Currently, only the list box, scroll grid, scroll view, and wheel view controls are supported.

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	-



Function	Triggering Event	Mandatory	Remarks
onmousedown	The mouse button is clicked.	No	-
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	-
onmousedownclick	The mouse is double-clicked.	No	-
onfocuseditexit	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.
onlanchange	The language is changed.	No	-
ontouchaction	The touchscreen is touched.	No	-
ongesturetap	The touchscreen is tapped.	No	-
ongesturelongtap	The touchscreen is tapped for more than 2 seconds.	No	-
ongesturefling	The touchscreen is flicked.	No	-
ongesturescroll	The touchscreen is scrolled.	No	-
ongesturepinch	The touchscreen is pinched with two fingers.	No	-
onanimstart	The animation is started.	No	-
onanimupdate	The animation is updated.	No	-
onanimstop	The animation is stopped.	No	-
onreboundstart	The rebound is started.	No	Currently, only the list box, scroll grid, scroll view, and wheel view controls are supported.



Function	Triggering Event	Mandatory	Remarks
onreboundupdate	The rebound is updated.	No	Currently, only the list box, scroll grid, scroll view, and wheel view controls are supported.
onreboundstop	The rebound is stopped.	No	Currently, only the list box, scroll grid, scroll view, and wheel view controls are supported.

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	<p>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 corresponding layer. For example:</p> <p>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:</p> <p>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:</p> <p>clut8, clut1, clut4, argb4444, argb0444, argb1555, argb0555, rgb565, argb8565, argb8888, and argb0888</p>



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
					The argb8888 format or argb1555 format is recommended.
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



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
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	
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	Color value	No	-	Valid for the toggle buttons. The color is not filled if this attribute is not set.



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
	disabled				

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 Spin

Table 1-10 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.
uparrownormalimg	Image for the up arrow in normal state	Images	Yes	-	Image: image file path+image file name
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	-	



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
downarrow normalimg	Image for the down arrow in normal state	Images	Yes	-	
downarrow mouseonimg	Image for the down arrow when the pointer moves to the arrow	Images	No	-	
downarrow pressing	Image for the down arrow when it is being clicked	Images	No	-	

Table 1-11 Private event functions for the spin

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

1.8 Clock

Table 1-12 Private attributes of the clock

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
minunit	Display of the minimum time unit	second minute hour day week month year	No	minute	-
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.



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
					For details about the presetting, see the <i>HiGV Development Guide</i> .
cursor <code>type</code>	Internal focus cursor type	image, color	No	color	Valid when dispmode is format
cursor <code>imag</code>	Internal focus cursor image	Valid image	No	-	Valid when cursor<code>type</code> is image . Image: image file path+image file name
cursor <code>color</code>	Internal focus cursor color	Color value	No	0x0	Valid when cursor<code>type</code> is color

Table 1-13 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	-
onposition	The position information is reported after the focus is switched.	No	-

1.9 List Box

Table 1-14 Private attributes of the list box

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
rownum	Number of displayed rows	Positive integer	Yes	-	-
colnum	Number of columns	Positive integer	Yes	-	-
datamodel	ID of the bound data model	Valid data model ID	No	-	-
rowselects <code>kin</code>	Skin of the list focus when the control is	Valid skin ID	Yes	-	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
	activated				
rownormal skin	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	-
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	Yes	This attribute specifies whether the internal



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
		No: non-cyclic			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 1-15 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 1-16 Private attributes of the List Col

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.



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
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 content	Valid image	No	-	This attribute is valid when 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.



1.10 Scroll Bar

Table 1-17 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	-	

1.11 Image

Table 1-18 Private attribute of the image

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



1.12 ImageEx

Table 1-19 Private attributes of the ImageEx

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
image	Image	Valid image	Yes	-	Image resource = Relative path of the image + Name of the image file
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	-
repeatcount	Number of repeat times of a dynamic image	-1 or positive integer	No	-1	The value -1 indicates infinite repeats.

Table 1-20 Private event function for the ImageEx

Function	Triggering Event	Mandatory	Description
onendofrepeat	End of dynamic image repeats	No	-

1.13 Scroll Grid

Table 1-21 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	Valid data model	No	-	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
	data model	ID			
focusactive skin	Image of the internal focus when the control is activated	Valid image resource	Yes	-	Image resource = Relative path of the image + Name of the image file
focusnorms kin	Image of the internal focus when the control is not activated	Valid image resource	No	-	Image resource = Relative path of the image + Name of the image file
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
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	Positive integer and 0	No	0	This attribute is the position of the focus



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
	that triggers the scrolling of the item				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, column – 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.
isdynamicdecoding	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.
hlineheight	Height of horizontal lines	Positive integers	No	2	Unit: pixel
hlinecolor	Color of horizontal lines	0x00000000–0xFFFFFFFF	No	Foreground color of the skin	-
vlinewidth	Width of vertical lines	Positive integers	No	2	Unit: pixel
vlinecolor	Color of vertical lines	0x00000000–0xFFFFFFFF	No	Foreground color of the skin	-
scrollbar	Bound scroll bar	Valid scroll bar ID	No	-	-



Table 1-22 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	-
onfinishfling	The fling gesture ends.	N	-

Table 1-23 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 memimage	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.

1.14 Track Bar

Table 1-24 Private attributes of the track bar

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
normaltrack	Slide block in the normal state	Valid image	No	-	Image: image file path+image file name
activetrack	Slide block in the activated state		No	-	
mousedowntrack	Slide block when it is being clicked		No	-	
slider	Background of the slide bar		Yes	-	
leftmargin	Margin of	Positive integer and 0	No	0	Unit: pixel



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
rightmargin	the slide bar	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 1-25 Private event function for the track bar

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

1.15 Scroll View

Table 1-26 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	
verticalscroll	Bound vertical	Valid scroll bar	No	-	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
bar	scroll bar	ID			
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.
direction	Scroll direction of the control content	Horizontal Vertical	No	vertical	-

Table 1-27 Private event function for the scroll view

Function	Triggering Event	Mandatory	Remarks
onviewmove	The view is moved.	No	-
onfinishfling	The fling gesture ends.	No	-



1.16 SlideUnlock

Table 1-28 Private attributes of the SlideUnlock

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
normalthumb	Slide block in the initial state	Valid image resource	Yes	-	Image resource = Relative path of the image + Name of the image file
touchthumb	Slide block in the activated state		No	-	
donethumb	Slide block in the completion state		No	-	
slider	Background of the slide bar		No	-	
leftmargin	Margin of the slide bar	0 and positive integers	No	0	Unit: pixel
rightmargin		0 and positive integers	No	0	Unit: pixel
topmargin		0 and positive integers	No	0	Unit: pixel
bottommargin		0 and positive integers	No	0	Unit: pixel
style	Style of the slide block	vertical: vertical style horizon: horizontal style	No	horizon	-

Table 1-29 Private event function for the SlideUnlock

Function	Triggering Event	Mandatory	Remarks
onunlock	The sliding unlock operation is completed.	No	-
onmove	The slide block moves.	No	-
onkickback	The slide block is back to the origin.	No	-



1.17 WheelView

Table 1-30 Private attributes of the WheelView

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
rownum	Number of displayed rows	Odd numbers greater than 1	Yes	-	-
datamodel	ID of the bound data model	Valid data model ID	Yes	-	-
upcoverskin	Skin of the upper cover text	Valid skin handle	No	-	The skin is set to the semitransparent picture type.
downcoverskin	Skin of the lower cover text	Valid skin handle	No	-	The skin is set to the semitransparent picture type.
iscirclescroll	Whether to scroll the text cyclically	yes/no	No	-	-

Table 1-31 Private event function for the WheelView

Function	Triggering Event	Mandatory	Remarks
onfocusSelect	An event of the focus row is reported after slide completion.	No	-

1.18 ImageView

Table 1-32 Private attributes of the ImageView

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
imagefile	Image path	Valid image path	Yes	-	-
imageindex	Subimage index	Valid subimage index	Yes	0	-
vouttype	Image output mode	VPSS/VO	Yes	-	-
disphandle	Handle to the display corresponding to the VO module	Valid handle value	Yes	0	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
wndhandle	Handle to the window corresponding to the VO module	Valid handle value	Yes	0	-

Table 1-33 Private event function for the ImageView

Function	Triggering Event	Mandatory	Remarks
oneventcallback	An internal error occurs when an image is completely displayed or being displayed.	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
isroundrect	Whether the round rectangle is filled	yes : filled no : not filled	N	no	This parameter is valid only when type is set to color . Currently, only static controls are supported, and movable controls are not supported.
roundradius	Radius of a rounded corner	Positive integer and 0	N	5	This parameter is valid only when isroundrect is set to yes. The radius of a rounded corner must be less than half of the width or height of the control. Otherwise, there is no drawing effect.

2.2 Font

Table 2-2 Font attributes

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
id	Font ID	Character string	Yes	-	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
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.
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	-	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 . The supported types include s8, u8, s16, u16, s32, u32, s64, u64, f32, d64, string, resid, and strid.



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
					Note that the length of types s8 to d64 must correspond 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.
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 .
cachecount	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" .
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 group	Character string	Yes	-	This attribute is a set of lanstr and is used for the clock control.
tt/mm/MM ...	Language abbreviation	Character string	Yes	-	Set of multi-language character string IDs See the following example: <pre><strset id = "STRSET_AMPM" tt = "STRID_AMPM_AM;STRID_AMPM_PM;"></pre> 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	-	<pre><timefmt id = "TIMEFMT_SHORT_TIME" en = "<tt> [h]:[m]:[s]" zh = "[H]:[m]:[s]" ar = "<tt> [h]:[m]:[s]"></pre> <p>The symbols <>, [], tt, h, m, and s are defined by the clock control. For details, see the xml definition of the clock control.</p>



2.5 Animation

Table 2-8 Public attributes of the animation

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
id	Unique ID of an animation	Character string	Y	-	The writing is id="ANIM_ID_XX" .
duration_ms	Duration (unit: ms)	Integer greater than 0	Y	-	-
repeatcount	Repetition count	-1 or integer greater than 0	N	1	The repetition is executed once by default. The value -1 indicates an infinite loop.
repeatmode	Repetition mode	0 or 1	N	0	The default value is 0 . 0: restart (The loop restarts.) 1: reverse (The loop starts reversely from the end position.)
delaystart	Delay time before the animation starts (unit: ms)	Positive integer	N	0	The default value is 0 .
animtype	Animation type	Enumeration type	Y	-	For details, see the definition of the HIGV_ANIM_TYPE_E type in the hi_gv_resm.h file. For example, 0: translation 1: alpha gradient 2: rolling

Table 2-9 Private attributes of the position translation animation

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
fromx	Horizontal start coordinate	Within the window	Y	-	-
fromy	Vertical start coordinate	Within the window	Y	-	-
tox	Horizontal end coordinate	Within the window	Y	-	-



Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
toy	Vertical end coordinate	Within the window	Y	-	-

Table 2-10 Private attributes of the rolling animation

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
directiontype	Rolling direction	Bottom-up: 0 Top-down: 1 Right to left: 2 Left to right: 3	Y		The start and end positions determine whether the animation is for rolling or expanding.
fromloc	Start position	0—control height (width)	Y	-	The maximum value is determined by the rolling direction. When the direction is up or down, the maximum value is the height. When the direction is left or right, the maximum value is the width.
toloc	End position	0—control height (width)	Y	-	Same as the remarks for fromloc

Table 2-11 Private attributes of the animation with alpha transparency gradient

Attribute	Definition	Value Range	Mandatory	Default Value	Remarks
fromalpha	Start alpha value	0–255	Y	-	
toalpha	End alpha value	0–255	Y	-	



3 References

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