DAQBnech/X

Programmer's Reference

Manual Rev. 1.00: September 28, 2000

Getting Service from ADLINK

Customer Satisfaction is always the most important thing for ADLink Tech Inc. If you need any help or service, please contact us and get it.

ADLINK Technology Inc.			
Web Site	http://www.adlink.com.tw http://www.adlinktechnology.tw		
Sales & Service	service@adlink.com.tw		
Technical Support	NuDAQ	nudaq@adlink.com.tw	
	NuDAM	nudam@adlink.com.tw	
	NuIPC	nuipc@adlink.com.tw	
	NuPRO	nupro@adlink.com.tw	
	Software	sw@adlink.com.tw	
	AMB	amb@adlink.com.tw	
TEL	+886-2-82265877	FAX	+886-2-82265717
Address	9F, No. 166, Jian Yi Road, Chungho City, Taipei, 235 Taiwan.		

Please inform or FAX us of your detailed information for a prompt, satisfactory and constant service.

Detailed Company Information			
Company/Organization			
Contact Person			
E-mail Address			
Address			
Country			
TEL		FAX	
Web Site			
Questions			
Product Model			
Environment to Use	☐OS: _____ ☐Computer Brand: _____ ☐M/B: ☐CPU: ☐Chipset: ☐Bios: ☐Video Card: ☐Network Interface Card:		
Challenge Description			
Suggestions for ADLINK			

Table of Contents

1

XdbBoolean Widget

XdbBoolean Widget is an UI component for operating boolean functions. It includes resources for users to set the preferable appearance and functions for the Widget, callback list and public function for users to program.

1.1 Resource

◆ **XtNbackColor**

Returns/sets the selected button back color for XdbBoolean Widget.

- Remarks

  Default: gray.

◆ **XtNbackgroundColor**

Returns/sets the selected button background color for XdbBoolean Widget.

- Remarks

  Default: gray.

◆ **XtNbuttonNum**

Returns/sets a value that determines the number of buttons.

- Settings

  The value range is between 1 and 32.

- Remarks

  Default: 1.

◆ **XtNradioButton**

Returns/sets the value that determines if the switch method of button is radio.

- Settings

Value	Description
True	Among the selected buttons, only one can be switched 'ON', the rest will be automatically switched 'OFF'.
False	You can arrange any button 'ON' or 'OFF' according to your requirement, regardless the amount.

- Remarks

  Default: false.

◆ **XtNcaption**

Specifies the caption for the Widget.

- Remarks

  Default value : “XdbBoolean”.

◆ **XtNcaptionColor**

Returns/sets the selected color for the caption.

- Remarks

  Default: black.

◆ **XtNcontrolMode**

Returns/sets a value that determines whether a button can be switched or not.

- Settings

Value	Description
0	Control, The button can be used to control and indicate state
1	Indicator, The button only be used indicate state

- Remarks

  Default: 0.

◆ **XtNdistance**

Returns/sets the value that determines the distance between buttons.

- Settings

  The value range is between 0 and 100.

- Remarks

  Default: 0.

◆ **XtNfont**

Returns/sets a value that determines the font of caption.

- Remarks

  Default:" fixed".

◆ **XtNindexSequence**

Returns/sets a value that determines the sequence of buttons.

- Settings

Value	Description
0	The sequence of buttons is from right to left or bottom to top.
1	The sequence of buttons is from left to right or top to bottom. Remarks

  Default: 0.

When the XtNorientation is 0, the sequence will be either left to right or right to left.

When the XtNorientation is 1, the sequence will be either top to bottom or bottom to top.

◆ **XtNindexVisiblet**

- Returns/sets a value that indicates whether the index text on a button is visible or not.
- Settings

Value	**Description and Illustration**
True	The index text on a button is visible.
False	The index text on a button is invisible.

- Remarks

  Default: false.

◆ **XtNoritentation**

Returns/sets a value that determines the orientation of buttons.

- Settings

Value	Description
0	The orientation of buttons is horizontal.
1	The orientation of buttons is vertical.

- Remarks

  Default: 0.

◆ **XtNstateVisible**

Returns/sets a value that determines whether the text on buttons (ON/OFF) is visible or not. This can only be set when the value of Text Visibility is True.

- Settings

Value	Description
True	Both State and Index on a button will be displayed.
False	The State on a button will not be displayed but the Index will still be displayed.

- Remarks

  Default: false.

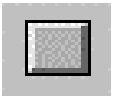
◆ **XtNdisplayStyle**

Returns/sets a value that determines the appearance of a button.

- Settings

  Value **Illustration**

  0: Square Button

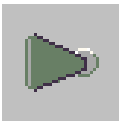


  1: Round Button

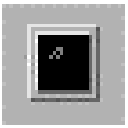
  2: LED Button

  3: Slide Switch

4: Toggle Switch

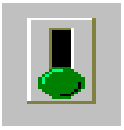


5: Square Radio Button



6: Square Push Button

7: Switch



8: LED Push Button

- Remarks

Default: 0 - square button.

◆ **XtNswitchOrientation**

Returns/sets a value that determines the orientation of switch button.

- Settings

Value	Description
0	Selected buttons are switched horizontally.
1	Selected buttons are switched vertically.

- Remarks

Default:1.

◆ **XtNtextColor**

Returns/sets the selected color for the text on a button.

- Remarks

  Default: green.

◆ **XtNtopColor**

Returns/sets the selected color for a button.

- Remarks

  Default : Red.

◆ **XtNvalue**

Returns/sets a value that the digital value combined by all button states.

- Settings

The value range is between 0 and 2^{Number}-1.

- Remarks

  Default: 0.

1.2 Public Function

◆ **XdbBooleanGetState()**

Reads the state of the indicated button.

- Syntax

  Bool XsbBooleanGetState(w,index)

  XdbBooleanWidget w,

  short index,

- Argument

  w : Specifies the XdbBoolean Widget.

  Index : Specifies the index of the button in XdbBoolean Widget.

- Return Value

Bool:

True indicates the button is 'ON',

False indicates 'OFF'.

◆ **XdbBooleanSetState()**

Sets the state for each button.

- Syntax

  Short XsbBooleanSetState(w, index ,state)

  XdbBooleanWidget w,

  short index,

  Bool state

- Argument

  w : Indicates the XdbBoolean Widget.

  index : Indicates the index of the button in XdbBoolean Widget.

  state : Indicates the state of a button,

- Return Value

  Void

1.3 Callback list

◆ **XtNbuttonChange**

One of the buttons in this XdbBoolean object is clicked by mouse pointer and XtNcontrolMode is 0.

◆ **Call data type**

*XdbBtnInfoptr(*Define in Boolean.h)

2

XdbSSegment Widget

XdbSSegment Widget is an UI component for displaying a number using seven-segment pattern. You can create your preferable slide by setting the attributes provided by this software component.

2.1 Resource

◆ **XtNbackColor**

Returns/sets the selected background color for D7Segment widget.

- Remarks

  Default: Gray.

◆ **XtNborderStyle**

Returns/sets a value that indicates whether the border is visible or not.

- Settings

Value	Description
0	The border is invisible.
1	The border is outline style.
2	The border is sinking style.
3	The border is rising style.
4	The border is 3-D style.

- Remarks

  Default: 0.

◆ **XtNblink**

Returns/sets a value that indicates if the XdbSSegment blink.

- Remarks

  Default: False.

◆ **XtNdeclined**

Returns/sets a value that indicates whether declined the digits or not.

- Settings

  Ture Declined the digits

  Flase Normal the digits

- Remarks

  Default: False.

◆ **XtNdigitAfterPoint**

Returns/sets a value that determines the digit number after point.

- Remarks

  Default: 2.

◆ **XtNdigitNumber**

Returns/sets a value that determines the digit number.

- Remarks

  Default:5.

◆ **XtNtopColor**

Returns/sets the selected foreground color for D7Segment widget.

- Remarks

  Default: Block.

◆ **XtNfont**

Returns/sets a value that determines the font of caption.

- Remarks

  Default:" fixed".

◆ **XtNprefixWithZero**

Returns/sets a value that determines if display all prefix digit into zero value

- Settings

  True Display all prefix digit into zero value

  False Don' t display prefix digit into zero value

- Remarks

  Default: False.

◆ **XtNshowUnusedSegment**

Returns/sets a value that determines if display the unused segment

- Settings

  True Display the unused segment with gray color

  False Don' t display the unused segment

- Remarks

  Default: True.

◆ **XtNsigned**

Returns/sets a value that determines if display the sign symbol of number

- Settings

  True Display the sign symbol of number

  False Don' t display the sign symbol of number

- Remarks

  Default: False.

◆ **XtNvalue**

Returns/sets a value that determines the number value for displaying digits

- Remarks

  Default: 1.

2.2 Public Function

◆ **XdbSSegmentGetValue()**

Gets the value for XdbSSegment Widget.

- Syntax

  float XdbSSegmentGetValue(w)

  Widget w,

- Argument

  w : Specifies the *XdbSSegmentWidget* Widget.

◆ **XdbSSegmentSetValue()**

Sets the value for XdbSSegment Widget.

- Syntax

  void XdbSSegmentSetValue(w,value)

  Widget w,

  float value,

- Argument

  w : Specifies the *XdbSSegmentWidget* Widget.

  value : Specifies *the value of XdbSSegmentWidget*

3

XdbLEDMeter Widget

XdbLEDMeter Witget is an UI component for displaying a number using LED bar pattern. You can create your preferable LED Meter by setting the attributes provided by this software component.

3.1 Resource

◆ **XtNaxisBaseNum**

Returns/sets the base value of axis scale when spacing method is by unit.

- Remarks

This resource is valid when *XtNaxisSpacing* is 2 (by unit).

◆ **XtNaxisDataMax**

Returns/sets a value that determines the maximum value of graph data.

- Remarks

This resource is valid only when *XtNaxisMappingEnable* is True

Default: 0.

◆ **XtNaisDataMin**

Returns/sets a value that determines the minimum value of graph data.

- Remarks

This resource is valid only when *XtNaxisMappingEnable* is True

Default: 0.

◆ **XtNaxisMajorNum**

Returns/sets the major number of axis scale when spacing method is ‘ number of division’ or ‘ by unit’ .

- Settings

Spacing method is ‘ number of division’:

It’ s mean the number that axis be divided by major mark

Spacing method is ‘ by unit’ :

It’ s mean the unit value of interval between major mark and base value

- Remarks

This resource is valid when *XtNaxisSpacing* is 1 or 2.

◆ **XtNaxisMinorNum**

Returns/sets the minor number of axis scale when spacing method is ‘ number of division’ or ‘ by unit’ .

- Settings

Spacing method is ‘ number of division’:

It’ s mean the number that one minor scale be divided by minor mark

Spacing method is ‘ by unit’ :

It’ s mean the unit value of interval between minor mark and major mark

- Remarks

This resource is valid when *XtNaxisSpacing* is 1 or 2.

◆ **XtNaxisMappingEnable**

Returns/sets a value that determines whether using mapping function that binary data map to scale value at axis.

- Settings

Value	**Description**
True	You will use mapping function.
False	You will not use mapping function. The data value is scale value

- Remarks

Default: false.

◆ **XtNaxisMaximum**

Returns/sets a value that determines the maximum value of scale at axis.

- Remarks

Default: 10.

◆ **XtNaxisMinimum**

Returns/sets a value that determines the minimum value of scale at axis.

- Remarks

  Default: 0.

◆ **XtNaxisSpacing**

Returns/sets a value that determines the spacing method of ticks mark at axis.

- Settings

Value	Description
0	Automatic
1	Number of division.
2	By unit

- Remarks

  Default: 0 - Automatic.

◆ **XtNbackColor**

Returns/sets the selected background color for DLEDMeter Widget.

- Remarks

  Default: Gray.

◆ **XtNborderStyle**

Returns/sets a value that indicates whether the border is visible or not.

- Settings

Value	Description
0	The border is visible.
1	The border is outline style.
2	The border is sinking style.
3	The border is rising style.
4	The border is 3-D style.

- Remarks

  Default: 0.

◆ **XtNcaption**

Specifies the caption for the object.

- Remarks

  Default value : XdbLEDMeter

◆ **XtNdisplayStyle**

Returns/sets a value that indicates whether LED Meter is vertical or horizontal.

- Settings

Value	Description
0	Horizonal
1	Vertical

- Remarks

  Default: 0.

◆ **XtNdigitalDisplay**

Returns/sets a value that indicates whether the digital display is visible or not.

- Settings

Value	Description
False	Digital Display is hidden.
True	Digital Display is visible.

- Remarks

  Default: True.

◆ **XtNdivisions**

Returns/sets a value that is the LED bar number.

- Remarks

  Default: 6.

◆ **XtNfillColor**

Returns/sets the selected LED bar color for DLEDMeter widget.

- Remarks

  Default: Green.

◆ **XtNfont**

Returns/sets a value that determines the font of caption.

- Remarks

  Default:" fixed".

◆ **XtNcapton**

Returns/sets a string that determines the label of LED Meter.

- Remarks

  Default: “LED_Meter”.

◆ **XtNformatString**

Returns/sets a value that determines the format string of scale.

- Remarks

  Default: “%.1f”

◆ **XtNcaptionColor**

Returns/sets the selected caption color for XdbLEDMeter Widget.

- Remarks

Default: Back.

◆ **XtNdigitColor**

Returns/sets the selected digit color for XdbLEDMeter Widget.

- Remarks

  Default: Back.

◆ **XtNticksMajorVisble**

Returns/sets a value that determines if display the major mark of axis

- Settings

  True Display the major mark of axis

  False Don’t display major mark of axis

- Remarks

  Default: True.

◆ **XtNticksMinorVisible**

Returns/sets a value that determines if display the minor mark of axis

- Settings

  True Display the minor mark of axis

  False Don’t display minor mark of axis

- Remarks

  Default: True.

◆ **XtNticksMajorColor**

Returns/sets the selected color for the major ticks mark of axis scale.

- Settings

  Default: white.

- Remarks

  Default: black.

◆ **XtNticksMinorColor**

Returns/sets the selected color for the minor ticks mark of axis scale.

- Remarks

  Default: black.

◆ **XtNtickLeftAbove**

Returns/sets a value that determines if display the ticks on the left side or above of LED Meter.

- Settings

True	Display the ticks on the left side or above of LED Meter
False	Don' t display the ticks on the left side or above of LED Meter

- Remarks

  Default: False.

◆ **XtNtickRightBottom**

Returns/sets a value that determines if display the ticks on the right side or bottom of LED Meter.

- Settings

True	Display the ticks on the right side or bottom of LED Meter
False	Don' t display the ticks on the right side or bottom of LED Meter

- Remarks

  Default: True.

◆ **XtNticksLabelColor**

Returns/sets the selected color for the ticks label of axis scale.

- Remarks

  Default: black.

◆ **XtNticksLabelLeftAbove**

Returns/sets a value that determines if display left tick label or above tick label at Y-axis.

- Settings

  True Display left ticks label or above ticks label

  False Don' t display left ticks label or above ticks label

- Remarks

  Default: False.

◆ **XtNticksLabelRightBottom**

Returns/sets a value that determines if display right tick label or bottom tick label at axis.

- Settings

  True Display right ticks label or bottom ticks label

  False Don' t display right ticks label or bottom ticks label

- Remarks

  Default: True.

◆ **XtNvalue**

Returns/sets a value that determines the number value for displaying LED bar

- Remarks

  Default: 5.

3.2 Public Function

◆ **XdbLEDMeterGetValue()**

Sets the value for XdbLEDMeter Widget.

- Syntax

  float XdbLEDMeterGetValue(w)

  Widget w,

- Argument

  w : Specifies the XdbLEDMeter Widget.

◆ **XdbLEDMeterSetValue()**

Sets the value for XdbLEDMeter Widget.

- Syntax

  void XdbLEDMeterSetValue(w,value)

  Widget w,

  float value,

- Argument

  w : Specifies the XdbLEDMeter Widget.

  value : Specifies the value of XdbLEDMeter.

4

XdbSlide Widget

XdbSlide Widget is an UI component for displaying a window containing a slider and tick marks. The function is like a scroll bar but has a different appearance. You can create your preferable slide by setting the attributes provided by this software component.

4.1 Resource

◆ **XtNbackgroundColor**

Returns/sets the selected background color for XdbSlide Widget.

- Remarks

  Default: Gray.

◆ **XtNslidebackColor**

Returns/sets the selected color for a slider.

- Remarks

  Default: White.

◆ **XtNborder**

Returns/sets a value that indicates whether the border is visible or not.

- Settings

Value	Description
True	The border is visible.
False	The border is hidden.

- Remarks

  Default: True.

◆ **XtNcaption**

Specifies the caption for the Widget.

- Remarks

  Default value : “XdbSlide”

◆ **XtNcaptionColor**

Returns/sets the selected color for the caption.

- Remarks

  Default: black.

◆ **XtNdigitalDisplay**

Returns/sets a value that indicates whether the digital display is visible or not.

- Settings

Value	Description
False	Digital Display is hidden.
True	Digital Display is visible.

- Remarks

  Default: True.

◆ **XtNdisplayStyle**

Returns/sets a value that determines the pattern type of a slide.

- Settings

Value	Illustration	Value	Illustration
0		1	
2		3	
4		5	

- Remarks

  Default: 0.

◆ **XtNtype**

Returns/sets a value that determines the control style of XdbSlide Widget.

- Settings

Value	Description
0	Numeric
1	Value pair

◆ **Remarks**

Default: 0.

◆ **XtNfont**

Returns/sets a value that determines the font of caption.

- Remarks

Default: fixed.

◆ **XtNformatString**

Returns/sets a value that determines the format string of scale.

- Remarks

Default: “%.1f”

◆ **XtNaxisInvertedEnable**

Returns/sets a value that determines if invert the direction of scale at axis.

- Settings

Value	**Description**
True	Inverted the direction of scale.
False	Normal axis scale.

- Remarks

  Default: False

◆ **XtNaxisLogEnable**

Returns/sets a value that determines if log10 axis scale.

- Settings

Value	Description
True	Log10 axis scale.
False	Normal axis scale.

- Remarks

If Log is True, then the XtNa*xisMaximum,* XtNa*xisMinimum*, XtNa*xisMaxiData,* and XtNa*xisMiniData* must greater than 0.

Default: False

◆ **XtNaxisMappingEnable**

Returns/sets a value that determines whether using mapping function that binary data map to scale value at axis.

- Settings

Value	Description
True	You will use mapping function.
False	You will not use mapping function. The data value is scale value

- Remarks

  Default: false.

◆ **XtNaxisMaximum**

Returns/sets a value that determines the maximum value of scale at axis.

- Remarks

  Default: 10.

◆ **XtNaxisMinimum**

Returns/sets a value that determines the minimum value of scale at axis.

- Remarks

  Default: 0.

◆ **XtNaxisDataMax**

Returns/sets a value that determines the maximum value of graph data.

- Remarks

This resource is valid only when XtNa*xisMappingEnable* is True

Default: 10.

◆ **XtNaisDataMin**

Returns/sets a value that determines the minimum value of graph data.

- Remarks

This resource is valid only when XtNa*xisMappingEnable* is True

Default: 0.

◆ **XtNaxisBaseNum**

Returns/sets the base value of axis scale when spacing method is by unit.

- Remarks

This resource is valid when *XtNaxisSpacing* is 2 (by unit).

◆ **XtNticksLabelColor**

Returns/sets the selected color for the ticks label of axis scale.

- Remarks

Default: black.

◆ **XtNticksLabelLeftAbove**

Returns/sets a value that determines if display left tick label or above tick label at Y-axis.

- Settings

True	Display left ticks label or above ticks label
False	Don' t display left ticks label or above ticks label

- Remarks

Default: False.

◆ **XtNticksLabelRightBottom**

Returns/sets a value that determines if display right tick label or bottom tick label at axis.

- Settings

True	Display right ticks label or bottom ticks label
False	Don' t display right ticks label or bottom ticks label

- Remarks

Default: True.

◆ **XtNticksLeftAbove**

Returns/sets a value that determines if display left ticks mark or above tick mark at axis.

- Settings

  True Display left ticks mark or above ticks mark.

  False Don' t display left ticks mark or above ticks mark.

- Remarks

  Default: False.

◆ **XtNticksRightBottom**

Returns/sets a value that determines if display right ticks mark or bottom ticks mark at axis.

- Settings

  True Display right ticks mark or bottom ticks mark

  False Don' t display right ticks mark or bottom ticks mark

- Remarks

  Default: True.

◆ **XtNticksMajorColor**

Returns/sets the selected color for the major ticks mark of axis scale.

- Remarks

  Default: black.

◆ **XtNticksMajorVisble**

Returns/sets a value that determines if display the major mark of axis

- Settings

  True Display the major mark of axis

  False Don' t display major mark of axis

- Remarks

  Default: True.

◆ **XtNaxisMajorNum**

Returns/sets the major number of axis scale when spacing method is ' number of division' or ' by unit' .

- Settings

Spacing method is ‘ number of division’:

It’ s mean the number that axis be divided by major mark

Spacing method is ‘ by unit’ :

It’ s mean the unit value of interval between major mark and base value

- Remarks

This resource is valid when *XtNaxisSpacing* is 1 or 2.

◆ **XtNticksMinorColor**

Returns/sets the selected color for the minor ticks mark of axis scale.

- Remarks

Default: black.

◆ **XtNticksMinorVisible**

Returns/sets a value that determines if display the minor mark of axis

- Settings

True Display the minor mark of axis

False Don’ t display minor mark of axis

- Remarks

Default: True.

◆ **XtNaxisMinorNum**

Returns/sets the minor number of axis scale when spacing method is ‘ number of division’ or ‘ by unit’ .

- Settings

Spacing method is ‘ number of division’:

It’ s mean the number that one minor scale be divided by minor mark

Spacing method is ‘ by unit’ :

It’ s mean the unit value of interval between minor mark and major mark

- Remarks

This resource is valid when *XtNaxisSpacing* is 1 or 2.

◆ **XtNaxisSpacing**

Returns/sets a value that determines the spacing method of ticks mark at axis.

- Settings

Value	Description
0	Automatic
1	Number of division.
2	By unit

- Remarks

  Default: 0 - Automatic.

◆ **XtNhighWarningEnable**

Returns/sets a value that determines if display the high waning area of axis

- Settings

True	Display the high waning area of axis
False	Don' t display high waning area of axis

- Remarks

  Default: True.

◆ **XtNhighWarningValue**

Returns/sets a value that determines minimum value of high waning area

- Remarks

  Default: 8.

◆ **XtNlowWarningEnable**

Returns/sets a value that determines if display the low waning area of axis

- Settings

True	Display the low waning area of axis
False	Don' t display low waning area of axis

- Remarks

  Default: True.

◆ **XtNlowWarningValue**

Returns/sets a value that determines maximum value of low waning area

- Remarks

  Default: 2.

◆ **XtNp#FillColor**

Returns/sets a value that determines the fill color of one pointer. The ' #' can be ' 1' to ' 8' . It' s mean the pointer identification.

- Remarks

  Default: Blue.

◆ **XtNp#FillStyle**

Returns/sets a value that determines the fill style of one pointer. The '#' can be ' 1' to ' 8' . It' s mean the pointer identification.

- Settings

Value	Description
0	None
1	Fill to maximum.
2	Fill to minimum

- Remarks

  Default: 2 - Nun.

◆ **XtNp#ControlMode**

Returns/sets a value that determines the control mode of one pointer. The ' #' can be ' 1 ' to ' 8' . It' s mean the pointer identification.

- Settings

Value	Description
0	Control., user can control the value and display the image of value
1	Indicator, only display the image of value

- Remarks

  Default: 0 - Control.

◆ **XtNp#Color**

Returns/sets a value that determines the color of one pointer. The ' #' can be ' 1' to ' 8' . It' s mean the pointer identification.

- Remarks

  Default: Gray.

◆ **XtNp#DisplayStyle**

Returns/sets a value that determines the style of one pointer. The '#' can be ' 1' to ' 8' . It' s mean the pointer identification.

- Settings

Value	Description
0	Normal, one rectangle box
1	Down arrow or Left arrow.
2	Up arrow or Right arrow.
3	None

- Remarks

  Default:0 - Normal.

◆ **XtNp#Value**

Returns/sets a value that determines value of one pointer. The '#' can be ' 1' to ' 8' . It' s mean the pointer identification.

- Remarks

  Default : 5.

◆ **XtNp#Visible**

Returns/sets a value that determines if display one pointer or not. The ' #' can be ' 1' to ' 8' . It' s mean the pointer identification.

- Settings

True	This pointer will be display
False	This pointer will be not display.

4.2 Public Function

◆ **XdbSlideGetValue**

Gets the value for XdbSlide Widget.

- Syntax

  short XdbSlideGetValue(w,index)

  XdbSlideWidget w,

  short index,

- Argument

  w : Specifies the XdbSlide*Widget* Widget.

  index : Specifies the index of pointer.

◆ **XdbSlideSetValue**

Sets the value for XdbSlide Widget.

- Syntax

  void XdbSlideSetValue(w,index,value)

  Widget w,

  short index,

  float value,

- Argument

  w : Specifies the XdbSlide*Widget* Widget.

  index : Specifies the index of pointer.

  value : Specifies the value of pointer.

4.3 Callback List

◆ **XtNvalueChange**

One of the pointer in this XdbSlide Widget is moved by the users.

Call data type

XdbPxValuePtr(define in Slide.h)

◆ **Remarks**

This event will occur when the value of pointer have be changed by user.

5

XdbKnob Widget

XdbKnob Widget is an UI component for displaying a window containing a Knob or Dial or Meter and tick marks. You can create your preferable slide by setting the attributes provided by this software component.

5.1 Resource

◆ **XtNbackgroundColor**

Returns/sets the selected background color for XdbKnob Widget

- Remarks

  Default: gray.

◆ **XtNborder**

Returns/sets a value that indicates whether the border is visible or not.

- Settings

Value	Description
0	The border is visible.
1	The border is hidden.

- Remarks

  Default: 0.

◆ **XtNcaption**

Specifies the caption for the object.

- Remarks

  Default value : XdbKnob

◆ **XtNcaptionColor**

Returns/sets the selected color for the caption.

- Remarks

  Default: black.

◆ **XtNdigitalDisplay**

Returns/sets a value that indicates whether the digital display is visible or not.

- Settings

Value	Description
0	Digital Display is hidden.
1	Digital Display is visible.

- Remarks

  Default: 1.

◆ **XtNknobBackColor**

Returns/sets the selected color for a Knob.

- Remarks

  Default: gray.

◆ **XtNdisplayStyle**

Returns/sets a value that determines the pattern type of a slide.

- Settings

Setting Value	Illustration	Setting Value	Illustration
0		1	
2		3	
4		5	

- Remarks

  Default: 0.

- **XtNtype**

Returns/sets a value that determines the control style of XdbKnob widget.

- Settings

Value	Description
0	Numeric
1	Value pair

- Remarks

Default: 0.

- **XtNfont**

Returns/sets a value that determines the font of caption.

- Remarks

Default: fixed.

- **XtNformatString**

Returns/sets a value that determines the format string of scale.

- Remarks

Default: “%.1d.”

- **XtNaxisInvertedEnable**

Returns/sets a value that determines if invert the direction of scale at axis.

Settings

Value	Description
True	Inverted the direction of scale.
False	Normal axis scale.

- Remarks

Default: False

◆ **XtNaxisLogEnable**

Returns/sets a value that determines if log10 axis scale.

- Settings

Value	Description
True	Log10 axis scale.
False	Normal axis scale.

- Remarks

If Log is True, then the XtNa*xisMaximum, XtNaxisMinimum*, XtNa*xisMaximum,* and *XtNaxisMinimum* must greater than 0.

Default: False

◆ **XtNaxisMappingEnable**

Returns/sets a value that determines whether using mapping function that binary data map to scale value at axis.

- Settings

Value	Description
True	You will use mapping function.
False	You will not use mapping function. The data value is scale value

- Remarks

Default: false.

◆ **XtNaxisMaximum**

Returns/sets a value that determines the maximum value of scale at axis.

Remarks

Default: 10.

◆ **XtNaxisMinimum**

Returns/sets a value that determines the minimum value of scale at axis.

- Remarks

Default: 0.

◆ **XtNaxisDataMax**

Returns/sets a value that determines the maximum value of graph data.

- Remarks

This resource is valid only when *XtNaxisMappingEnable* is True

Default: 0.

◆ **XtNaxisDataMin**

Returns/sets a value that determines the minimum value of graph data.

- Remarks

This resource is valid only when *XtNaxisMappingEnable* is True

Default: 0.

◆ **XtNaxisBaseNum**

Returns/sets the base value of axis scale when spacing method is by unit.

- Remarks

This resource is valid when XtN*axisSpacing* is 2 (by unit).

◆ **XtNticksLabelColor**

Returns/sets the selected color for the ticks label of axis scale.

- Remarks

Default: black.

◆ **XtNticksMajorColor**

Returns/sets the selected color for the major ticks mark of axis scale.

- Remarks

Default: black.

◆ **XtNticksMajorVisible**

Returns/sets a value that determines if display the major mark of axis

- Settings

True Display the major mark of axis

False Don' t display major mark of axis

- Remarks

Default: True.

◆ **XtNaxisMajorNum**

Returns/sets the major number of axis scale when spacing method is ' number of division' or ' by unit' .

- Settings

Spacing method is ‘ number of division’:

It’ s mean the number that axis be divided by major mark

Spacing method is ‘ by unit’ :

It’ s mean the unit value of interval between major mark and base value

- Remarks

This resource is valid when *XtNaxisSpacing* is 1 or 2.

◆ **XtNticksMinorColor**

Returns/sets the selected color for the minor ticks mark of axis scale.

Remarks

Default: black.

◆ **XtNticksMinorVisible**

Returns/sets a value that determines if display the minor mark of axis

- Settings

True Display the minor mark of axis

False Don’ t display minor mark of axis

- Remarks

Default: True.

◆ **XtNaisMinorNum**

Returns/sets the minor number of axis scale when spacing method is ‘ number of division’ or ‘ by unit’ .

- Settings

Spacing method is ‘ number of division’:

It’ s mean the number that one minor scale be divided by minor mark

Spacing method is ‘ by unit’ :

It’ s mean the unit value of interval between minor mark and major mark

- Remarks

This resource is valid when *XtNaxisSpacing* is 1 or 2.

◆ **XtNaxisSpacing**

Returns/sets a value that determines the spacing method of ticks mark at axis.

- Settings

Value	Description
0	Automatic
1	Number of division.
2	By unit

- Remarks

  Default: 0 - Automatic.

◆ **XtNhighWarningEnable**

Returns/sets a value that determines if display the high waning area of axis

- Settings

True	Display the high waning area of axis
False	Don' t display high waning area of axis

- Remarks

  Default: True.

◆ **XtNhighWarningValue**

Returns/sets a value that determines minimum value of high waning area

- Remarks

  Default: 8.

◆ **XtNlowWarningEnable**

Returns/sets a value that determines if display the low waning area of axis

- Settings

True	Display the low waning area of axis
False	Don' t display low waning area of axis.

- Remarks

  Default: True.

◆ **XtNlowWarningValue**

Returns/sets a value that determines maximum value of low waning area.

- Remarks

  Default: 2.

◆ **XtNp#FillColor**

Returns/sets a value that determines the fill color of one pointer. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the pointer identification.

- Remarks

  Default: Blue.

◆ **XtNp#FillStyle**

Returns/sets a value that determines the fill style of one pointer. The ‘#’ can be ‘ 1’ to ‘ 8’ . It’ s mean the pointer identification.

- Settings

Value	Description
0	None
1	Fill to maximum.
2	Fill to minimum

- Remarks

  Default: 0 - Nun.

◆ **XtNp#ControlMode**

Returns/sets a value that determines the control mode of one pointer. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the pointer identification.

- Settings

Value	Description
0	Indicator, only display the image of value
1	Control., user can control the value and display the image of value

- Remarks

  Default: 1 - Control.

◆ **XtNp#Color**

Returns/sets a value that determines the color of one pointer. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the pointer identification.

- Remarks

  Default: Gray.

◆ **XtNp#DisplayStyle**

Returns/sets a value that determines the style of one pointer. The '#' can be '1' to '8'. It's mean the pointer identification.

- Settings

Value	Description
0	Normal, one rectangle box
1	Down arrow or Left arrow.
2	Up arrow or Right arrow.
3	None

- Remarks

  Default:0 - Normal.

◆ **XtNp#Value**

Returns/sets a value that determines value of one pointer. The '#' can be '1' to '8'. It's mean the pointer identification.

◆ **XtNp#Visible**

Returns/sets a value that determines if display one pointer or not. The '#' can be '1' to '8'. It's mean the pointer identification.

- Settings

True	This pointer will be display
False	This pointer will be not display.

5.2 Public Function

◆ **XdbKnobGetValue**

Gets the value for XdbKnob Widget.

- Syntax

  short XdbKnobGetValue(w, index)

  XdbKnobWidget w,

  short index,

- Argument

  w : Specifies the XdbKnob*Widget* Widget.

  index : Specifies the index of pointer.

◆ **XdbKnobSetValue**

Sets the value for XdbKnob Widget.

- Syntax

  void XdbKnobSetValue(w,index,value)

  XdbKnobWidget w,

  short index,

  float value,

- Argument

  w : Specifies the XdbKnob*Widget* Widget.

  index : Specifies the index of pointer.

  value : Specifies the value of pointer.

5.3 Callback List

◆ **XtNvalueChange**

One of the pointer in this XdbKnob Widget is moved by the users.

Call data type

XdbPxValuePtr(define in Knob.h)

◆ **Remarks**

This event will occur when the value of pointer have be changed by user.

6

XdbGraph Widget

XdbGraph Widget is an UI component for displaying waveform data input by users. Users can get the data from data acquisition hardware and display it by using this widget. X-axis represents the input data count, and Y-axis represents the application of input data. This application can make 1-8 plots display 8 sets of different data. You can select mapping function of Y-axis to map real data to scale value.

6.1 Resource

- **XtNbackground**

Returns/sets the selected background color for XdbGragh Widget.

- Remarks
  Default: gray.

- **XtNcaption**

Specifies the caption for the Widget.

- Remarks
  Default value :" "

- **XtNcaptionColor**

Returns/sets the selected color for the caption.

- Remarks
  Default: black.

- **XtNcaptionFont**

Returns/sets a value that determines the font of caption.

- Remarks
  Default:" fixed".

◆ **XtNplotAreaColor**

Returns/sets the selected color for the back ground of plot area.

- Remarks

  Default: black.

◆ **XtNplotMode**

Returns/sets a value that determines the display mode of plots.

- Settings

Value	Description
0	Overlaid Plot
1	Stack Plot

- Remarks

  Default: 0.

◆ **XtNplotsNum**

Returns/sets a value that determines the number of plots.

- Settings

The value range is between 1 and 8.

- Remarks

  Default: 1.

◆ **XtNxAutoScale**

Returns/sets a value that determines whether x scale is automatically display its entire contents.

- Settings

Value	Description
True	Automatically shows entire x scale range.
False	Keeps display number of X scale is *XtNxViewNumber*

- Remarks

When *XtNxAutoScale* value is true, there is no scroll bar. When the value is false, the data display range is over x scale range, the scroll bar will show up.

Default: True.

◆ **XtNxFormat**

Returns/sets a value that determines the ticks format of scale at X-axis.

- Settings

Format Style	Format String
Number	“Decimal”, “Hexdecimal”, “Octal”, “Binary”
Time	“hh:mm:ss”, “mm:ss”
Date	“mm/dd/yy”, “mm/dd”

- Remarks

  Default: “Decimal”

◆ **XtNxViewNumber**

Returns/sets x scale display range.

- Remarks

  Default: 100

◆ **XtNxLabelColor**

Returns/sets the selected color for the ticks label of X-axis scale.

- Remarks

  Default: black.

◆ **XtNxAboveLabel**

Returns/sets a value that determines if display left tick label or above tick label at X-axis.

- Settings

True	Display left ticks label or above ticks label
False	Don’t display left ticks label or above ticks label

- Remarks

  Default: False.

◆ **XtNxBottomLabel**

Returns/sets a value that determines if display right tick label or bottom tick label at X-axis.

- Settings

True	Display right ticks label or bottom ticks label
False	Don’t display right ticks label or bottom ticks label

- Remarks

  Default: True.

◆ **XtNxAboveMarks**

Returns/sets a value that determines if display above tick mark at X-axis.

- Settings

  True Display left ticks mark or above ticks mark.

  False Don' t display left ticks mark or above ticks mark.

- Remarks

  Default: False.

◆ **XtNxBottomMarks**

Returns/sets a value that determines if display bottom ticks mark at X-axis.

- Settings

  True Display right ticks mark or bottom ticks mark

  False Don' t display right ticks mark or bottom ticks mark

- Remarks

  Default: True.

◆ **XtNxMarksColor**

Returns/sets the selected color for the marks of X-axis scale.

- Remarks

  Default: Blue.

◆ **XtNxMajorGrid**

Returns/sets a value that determines if drawing major grid line of X-axis on plots

- Settings

  True Drawing major grid line of X-axis

  False Don' t drawing major grid line of X-axis

- Remarks

  Default: True.

◆ **XtNxMajorGridColor**

Returns/sets the selected color for the major grid line of X-axis.

- Remarks

  Default: white.

◆ **XtNxMajorNum**

Returns/sets the major number of X-axis scale when spacing method is ‘ number of division’ or ‘ by unit’ .

- Settings

Spacing method is ‘ number of division’:

It’ s mean the number that X-axis be divided by major mark

Spacing method is ‘ by unit’ :

It’ s mean the unit value of interval between major mark and base value

- Remarks

This resource is valid when *XtNxSpacing* is 1 or 2.

◆ **XtNxMinorGrid**

Returns/sets a value that determines if drawing minor grid line of X-axis on plots

- Settings

True	Drawing minor grid line of X-axis
False	Don’ t drawing minor grid line of X-axis

- Remarks

Default: False.

◆ **XtNxMinorGridColor**

Returns/sets the selected color for the minor grid line of X-axis.

- Remarks

Default: gray.

◆ **XtNxMinorNum**

Returns/sets the minor number of X-axis scale when spacing method is ‘number of division’ or ‘ by unit’ .

- Settings

Spacing method is ‘ number of division’:

It’ s mean the number that one minor scale be divided by minor mark

Spacing method is ‘ by unit’ :

It’ s mean the unit value of interval between minor mark and major mark

- Remarks

This resource is valid when *XtNxSpacing* is 1 or 2.

◆ **XtNxSpacing**

Returns/sets a value that determines the spacing method of ticks mark at X-axis.

- Settings

Value	Description
0	Automatic
1	Number of division.
2	By unit

- Remarks

Default: 0 - Automatic.

◆ **XtNyAutoScale**

Returns/sets a value that determines whether y scale is automatically display its entire contents.

- Settings

Value	Description
True	Automatically shows entire y scale range.
False	Keeps Y scale range that is between XtNyminimum and XtNymaximum.

- Remarks

When XtNyAutoScale value is true, there is no scroll bar. When the value is false, the data display range is over y scale range, the scroll bar will show up.

Default: False.

◆ **XtNyFormat**

Returns/sets a value that determines the format string of Y-Axis scale.

- Settings

Format Style	Format String
Number	“.”, “.0”, “.##0”, “.###”, “.######0”
Scientific	“e”, “E”
Symbolic Engineering	“kV”, “kHz”, “kA”, “kl”, “Deg”

Percentage	“%”, “.#0%”, “%*100”, “.#0%*100”
Currency	“$.”, “$.#0”
Scaling	“*.001”, “*.01”, “*100”, “*1000”, “*100+100”,“*100-100”, “+10000”, “+150”

- Remarks

  Default: Number “.#0”

◆ **XtNyLog**

Returns/sets a value that determines if log10 Y-axis scale.

- Settings

Value	Description
True	Log10 Y-axis scale.
False	Normal Y-axis scale.

- Remarks

If Log is True, then the YAxis.Maximum, YAxis.Minimum, and y data must greater than 0.

Default: False

◆ **XtNyMapping**

Returns/sets a value that determines whether using mapping function that binary data map to scale value at Y-axis.

- Settings

Value	Description
True	You will use mapping function.
False	You will not use mapping function. The data value is scale value

- Remarks

  Default: false.

◆ **XtNyMaximum**

Returns/sets a value that determines the maximum value of scale at Y-axis.

- Settings
- Remarks

  Default: 5.

◆ **XtNyMinimum**

- Returns/sets a value that determines the minimum value of scale at Y-axis.Remarks

  Default: -5.

◆ **XtNyDataMax**

Returns/sets a value that determines the maximum value of graph data.

- Remarks

This resource is valid only when *XtNyMapping* is True

Default: 0.

◆ **XtNyDataMin**

Returns/sets a value that determines the minimum value of graph data.

- Remarks

This resource is valid only when *XtNyMapping* is True

Default: 0.

◆ **XtNyBaseNum**

Returns/sets the base value of Y-axis scale when spacing method is by unit.

- Remarks

This resource is valid when *XtNySpacing* is 2 (by unit).

◆ **XtNyLabelColor**

Returns/sets the selected color for the ticks label of Y-axis scale.

- Remarks

  Default: black.

◆ **XtNyLeftLabel**

Returns/sets a value that determines if display left tick label or above tick label at Y-axis.

- Settings

  True Display left ticks label or above ticks label

  False Don' t display left ticks label or above ticks label

- Remarks

  Default: False.

◆ **XtNyRightLabel**

Returns/sets a value that determines if display right tick label or bottom tick label at Y-axis.

- Settings

  True Display right ticks label or bottom ticks label

  False Don' t display right ticks label or bottom ticks label

- Remarks

  Default: True.

◆ **XtNyLeftMarks**

Returns/sets a value that determines if display left ticks mark or above tick mark at Y-axis.

- Settings

  True Display left ticks mark or above ticks mark.

  False Don' t display left ticks mark or above ticks mark.

- Remarks

  Default: False.

◆ **XtNyRightMarks**

Returns/sets a value that determines if display right ticks mark or bottom ticks mark at Y-axis.

- Settings

  True Display right ticks mark or bottom ticks mark

  False Don' t display right ticks mark or bottom ticks mark

- Remarks

  Default: True.

◆ **XtNyMarksColor**

Returns/sets the selected color for the ticks mark of Y-axis scale.

- Remarks

  Default: black.

◆ **XtNyMajorGrid**

Returns/sets a value that determines if drawing major grid line of Y-axis on plots

- Settings

  True Drawing major grid line of Y-axis
  False Don' t drawing major grid line of Y-axis

- Remarks

  Default: False.

◆ **XtNyMajorGridColor**

Returns/sets the selected color for the major grid line of Y-axis.

- Remarks

  Default: white.

◆ **XtNyMajorNum**

Returns/sets the major number of Y-axis scale when spacing method is ‘ number of division’ or ‘ by unit’ .

- Settings

Spacing method is ‘ number of division’:

It’s mean the number that Y-axis be divided by major mark

Spacing method is ‘ by unit’ :

It’ s mean the unit value of interval between major mark and base value

- Remarks

This resource is valid when XtNy*Spacing* is 1 or 2.

◆ **XtNyMinorGrid**

Returns/sets a value that determines if drawing minor grid line of Y-axis on plots

- Settings

True	Drawing minor grid line of Y-axis
False	Don’ t drawing minor grid line of Y-axis

- Remarks

  Default: False.

◆ **XtNyGridColor**

Returns/sets the selected color for the minor grid line of Y-axis.

- Remarks

  Default: gray.

◆ **XtNyMajorMarks**

Returns/sets a value that determines if display the major mark of Y-axis

- Settings

  True Display the major mark of Y-axis

  False Don' t display major mark of Y-axis

- Remarks

  Default: True.

◆ **XtNyMinorMarks**

Returns/sets a value that determines if display the minor mark of Y-axis

- Settings

  True Display the minor mark of Y-axis

  False Don' t display minor mark of Y-axis

- Remarks

  Default: True.

◆ **XtNyMinorNum**

Returns/sets the minor number of Y-axis scale when spacing method is ' number of division' or ' by unit' .

- Settings

Spacing method is ' number of division':

It' s mean the number that one minor scale be divided by minor mark

Spacing method is ' by unit' :

It' s mean the unit value of interval between minor mark and major mark

- Remarks

This resource is valid when *XtNySpacing* is 1 or 2.

◆ **XtNySpacing**

Returns/sets a value that determines the spacing method of ticks mark at Y-axis.

- Settings

Value	Description
0	Automatic
1	Number of division.
2	By unit

- Remarks

  Default: 0 - Automatic.

◆ **XtNp#FillBase**

Returns/sets a value that determines the fill method of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Settings

Value	Description
0	None, no fill method
1	Fill to 0.0
2	Fill to – Infinity
3	Fill to + Infinity

- Remarks

  Default: 0 - None.

◆ **XtNp#FillColor**

Returns/sets a value that determines the fill color of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Remarks

  Default: Blue.

◆ **XtNp#Interpolation**

Returns/sets a value that determines the interpolation method of graph line of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Settings

Value	Description
0	Direct connect
1	XY, first draw line of X-axis then draw line of Y-axis.
2	YX, first draw line of Y-axis then draw line of X-axis.

- Remarks

  Default: 0 - Direct connect.

◆ **XtNp#LineColor**

Returns/sets a value that determines the line color of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Remarks

  Default: Red.

◆ **XtNp#LineType**

Returns/sets a value that determines the line style of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Settings

Value	Description
0	Solid
1	Dash.
2	Dot

- Remarks

  Default: 0 - Solid.

◆ **XtNp#LineWidth**

Returns/sets a value that determines the line width of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Settings

  The range is 1 ~ 5

- Remarks

  Default: 1.

◆ **XtNp#PointColor**

Returns/sets a value that determines the point color of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Remarks

  Default: Yellow.

◆ **XtNp#PointStyle**

Returns/sets a value that determines the point style of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Settings

Value	Description
0	None
1	Empty square.
2	Solid square

3	Empty diamond
4	Solid diamond
5	Empty circle
6	Solid circle
7	X
8	Cross(+)

- Remarks

  Default: 0 - None.

◆ **XtNp#FillMode**

Returns/sets a value that determines the point style of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Settings

Value	Description
0	to zero
1	- Infinity.
2	+ Infinity
3	Empty diamond
4	Solid diamond
5	Empty circle
6	Solid circle
7	X
8	Cross(+)

- Remarks

  Default: 0 - None.

6.2 Public Function

- **XdbGraphDraw ()**

- Syntax

Short XdbGraphDraw**(***w,pData,num.plotNo)*

XdbChartWidGet w,

double* p*Data,*

int num

intplotNo

- Argument

w : Specifies the Widget

pData : Specifies a graph data or a array of chart data.

num : Specifies the num of data

plotNo : Specifies the number of plot

Return Value

Zero if the function is successful; otherwise negative number.

-1, the data type of Data is invalid

-2, the PlotNo is invalid, it must be smaller than XtNp*lotNum*

-3, the dimension of array is invalid, it must be 1 dimension

- **XdbGraphDraws()**

- Syntax

Short XdbGraphDraws**(***w,pData,num.plotNo)*

XdbChartWidGet w,

double* p*Data,*

int nPlot

int nData,

Boolean bInverted,

- Argument

w : Specifies the Widget

pData : Specifies a graph data or a array of chart data.

nPlot : Specifies the plot number of pData.

num : Specifies the data number of pData.

bInverted : Specifies if pData inverted.

Return Value

Zero if the function is successful; otherwise negative number.

-1, the data type of Data is invalid

-2, the PlotNum is invalid, it must be equal or smaller than XtNp*lotNum*

-3, the dimension of array is invalid, it must be 1 dimension, or element number of Data array is invalid, it must be the multiple number of PlotNum.

7

XdbChart Widget

XdbChart Widget is an UI component for displaying waveform chart data input by users. Users can get the data from data acquisition hardware and display it by using this widget. X-axis represents the input data count, and Y-axis represents the application of input data. This application can make 1-8 plots display 8 sets of different data. You can select mapping function of Y-axis to map real data to scale value.

7.1 Resource

◆ **XtNbackground**

Returns/sets the selected background color for XdbChart widget.

- Remarks

  Default: gray.

◆ **XtNcaption**

Specifies the caption for the Widget.

- Remarks

  Default value : Chart

◆ **XtNcaptionColor**

Returns/sets the selected color for the caption.

- Remarks

  Default: black.

◆ **XtNcaptionFont**

Returns/sets a value that determines the font of caption.

- Remarks

  Default:" fixed".

◆ **XtNhistoryLength**

Returns/sets a value that determines history length of XdbChart Widget.

- Settings

The value range is greater than 1024.

- Remarks

The larger number you set the more space you can have for storing chart data.

Default: 1024.

◆ **XtNplotAreaColor**

Returns/sets the selected color for the back ground of plot area.

- Remarks

  Default: black.

◆ **XtNplotMode**

Returns/sets a value that determines the display mode of plots.

- Settings

Value	Description
0	Overlaid Plot
1	Stack Plot

- Remarks

  Default: 0.

◆ **XtNplotsNum**

Returns/sets a value that determines the number of plots.

- Settings

The value range is between 1 and 8.

- Remarks

  Default: 1.

◆ **XtNupdateMode**

Returns/sets a value that determines the update mode of chart view, when data is consistently input.

- Settings

Value	Description
0	Strip
1	Scope
2	Sweep

- Remarks

  Default: 0 - Strip

◆ **XtNxFormat**

Returns/sets a value that determines the ticks format of scale at X-axis.

- Settings

Format Style	Format String
Number	“Decimal”, “Hexdecimal”, “Octal”, “Binary”
Time	“hh:mm:ss”, “mm:ss”
Date	“mm/dd/yy”, “mm/dd”

- Remarks

  Default: “Decimal”

◆ **XtNxViewNum**

Returns/sets x scale display range.

- Remarks

  Default: 100

◆ **XtNxLabelColor**

Returns/sets the selected color for the ticks label of X-axis scale.

- Remarks

  Default: black.

◆ **XtNxAboveLabel**

Returns/sets a value that determines if display left tick label or above tick label at X-axis.

- Settings

True	Display left ticks label or above ticks label
False	Don’t display left ticks label or above ticks label

- Remarks

  Default: False.

◆ XtNxBottomLabel

Returns/sets a value that determines if display right tick label or bottom tick label at X-axis.

- Settings

  True Display right ticks label or bottom ticks label

  False Don' t display right ticks label or bottom ticks label

- Remarks

  Default: True.

◆ XtNxAboveMarks

Returns/sets a value that determines if display left ticks mark or above tick mark at X-axis.

- Settings

  True Display left ticks mark or above ticks mark.

  False Don' t display left ticks mark or above ticks mark.

- Remarks

  Default: False.

◆ XtNxBottomMarks

Returns/sets a value that determines if display right ticks mark or bottom ticks mark at X-axis.

- Settings

  True Display right ticks mark or bottom ticks mark

  False Don' t display right ticks mark or bottom ticks mark

- Remarks

  Default: True.

- XtNxMarksColor

Returns/sets the selected color for the ticks mark of X-axis scale.

- Remarks

  Default: black.

◆ XtNxMajorGrid

Returns/sets a value that determines if drawing major grid line of X-axis on plots

- Settings

  True Drawing major grid line of X-axis

  False Don' t drawing major grid line of X-axis

- Remarks

  Default: False.

◆ **XtNxMajorGridColor**

Returns/sets the selected color for the major grid line of X-axis.

Remarks

Default: white.

◆ **XtNxMajorMarks**

Returns/sets a value that determines if display the major mark of X-axis

- Settings

  True Display the major mark of X-axis

  False Don' t display major mark of X-axis

- Remarks

  Default: True.

◆ **XtNxMajorNum**

Returns/sets the major number of X-axis scale when spacing method is ' number of division' or ' by unit' .

- Settings

Spacing method is ' number of division':

It' s mean the number that X-axis be divided by major mark

Spacing method is ' by unit' :

It' s mean the unit value of interval between major mark and base value

- Remarks

This resource is valid when *XtNxSpacing* is 1 or 2.

◆ **XtNxMinorGrid**

Returns/sets a value that determines if drawing minor grid line of X-axis on plots

- Settings

  True Drawing minor grid line of X-axis

  False Don' t drawing minor grid line of X-axis

- Remarks

  Default: False.

◆ **XtNxMinorGridColor**

Returns/sets the selected color for the minor grid line of X-axis.

- Remarks

  Default: gray.

◆ **XtNxMinorMarks**

Returns/sets a value that determines if display the minor mark of X-axis

- Settings

  True Display the minor mark of X-axis

  False Don' t display minor mark of X-axis

- Remarks

  Default: True.

◆ **XtNxMinorNum**

Returns/sets the minor number of X-axis scale when spacing method is ' number of division' or ' by unit' .

- Settings

Spacing method is ' number of division':

It' s mean the number that one minor scale be divided by minor mark

Spacing method is ' by unit' :

It' s mean the unit value of interval between minor mark and major mark

- Remarks

This resource is valid when *XtNxSpacing* is 1 or 2.

◆ **XtNxSpacing**

Returns/sets a value that determines the spacing method of ticks mark at X-axis.

- Settings

  Value Description

0	Automatic
1	Number of division.
2	By unit

- Remarks

  Default: 0 - Automatic.

◆ **XtNyFormat**

Returns/sets a value that determines the format string of Y-Axis scale.

- Settings

Format Style	Format String
Number	“.”, “.0”, “.##0”, “.###”, “.######0”
Scientific	“e”, “E”
Symbolic Engineering	“kV”, “kHz”, “kA”, “kl”, “Deg”
Percentage	“%”, “.#0%”, “%*100”, “.#0%*100”
Currency	“$.”, “$.#0”
Scaling	“*.001”, “*.01”, “*100”, “*1000”, “*100+100”, “*100-100”, “+10000”, “+150”

- Remarks

  Default: Number “.#0”

◆ **XtNyLog**

Returns/sets a value that determines if log10 Y-axis scale.

- Settings

Value	Description
True	Log10 Y-axis scale.
False	Normal Y-axis scale.

- Remarks

If Log is True, then the XtNyMaximum, XtNyMinimum, and y data must greater than 0.

Default: False

◆ **XtNyMapping**

Returns/sets a value that determines whether using mapping function that binary data map to scale value at Y-axis.

- Settings

Value	Description
True	You will use mapping function.
False	You will not use mapping function. The data value is scale value

- Remarks

  Default: false.

◆ **XtNyMaximum**

Returns/sets a value that determines the maximum value of scale at Y-axis.

- Remarks

  Default: 5.

◆ **XtNyMinimum**

Returns/sets a value that determines the minimum value of scale at Y-axis.

- Remarks

  Default:-5.

◆ **XtNyDataMax**

Returns/sets a value that determines the maximum value of graph data.

- Remarks

This resource is valid only when *XtNyMapping* is True

  Default: 0.

◆ **XtNyDataMin**

Returns/sets a value that determines the minimum value of graph data.

- Remarks

This resource is valid only when *XtNyMapping* is True

  Default: 0.

◆ **XtNyBaseNum**

Returns/s ets the base value of Y-axis scale when spacing method is by unit.

- Remarks

This resource is valid when *XtNySpacing* is 2 (by unit).

◆ **XtNyLabelColor**

Returns/sets the selected color for the ticks label of Y-axis scale.

- Remarks

  Default: Blue.

◆ **XtNyLeftLabel**

Returns/sets a value that determines if display left tick label or above tick label at Y-axis.

- Settings

  True Display left ticks label or above ticks label

  False Don' t display left ticks label or above ticks label

- Remarks

  Default: False.

◆ **XtNyRightLabel**

Returns/sets a value that determines if display right tick label or bottom tick label at Y-axis.

- Settings

  True Display right ticks label or bottom ticks label

  False Don' t display right ticks label or bottom ticks label

- Remarks

  Default: True.

◆ **XtNyLeftMarks**

Returns/sets a value that determines if display left ticks mark or above tick mark at Y-axis.

- Settings

  True Display left ticks mark or above ticks mark.

  False Don' t display left ticks mark or above ticks mark.

- Remarks

  Default: False.

◆ **XtNyRightMarks**

Returns/sets a value that determines if display right ticks mark or bottom ticks mark at Y-axis.

- Settings

  True Display right ticks mark or bottom ticks mark

  False Don' t display right ticks mark or bottom ticks mark

- Remarks

  Default: True.

◆ **XtNyMarksColor**

Returns/sets the selected color for the ticks mark of Y-axis scale.

- Remarks

  Default: black.

◆ **XtNyMajorGrid**

Returns/sets a value that determines if drawing major grid line of Y-axis on plots

- Settings

  True Drawing major grid line of Y-axis

  False Don' t drawing major grid line of Y-axis

- Remarks

  Default: False.

◆ **XtNyMajorGridColor**

Returns/sets the selected color for the major grid line of Y-axis.

- Remarks

  Default: white.

◆ **XtNyMajorMarks**

Returns/sets a value that determines if display the major mark of Y-axis

- Settings

  True Display the major mark of Y-axis

  False Don' t display major mark of Y-axis

- Remarks

  Default: True.

◆ **XtNyMajorNum**

Returns/sets the major number of Y-axis scale when spacing method is ' number of division' or ' by unit' .

- Settings

Spacing method is ' number of division' :

It' s mean the number that Y-axis be divided by major mark

Spacing method is ‘ by unit’ :

It’ s mean the unit value of interval between major mark and base value

- Remarks

This resource is valid when XtNy*Spacing* is 1 or 2.

◆ **XtNyMinorGrid**

Returns/sets a value that determines if drawing minor grid line of Y-axis on plots

- Settings

True Drawing minor grid line of Y-axis

False Don’ t drawing minor grid line of Y-axis

- Remarks

Default: False.

◆ **XtNyMinorGridColor**

Returns/sets the selected color for the minor grid line of Y-axis.

- Remarks

Default: gray.

◆ **XtNyMinorMarks**

Returns/sets a value that determines if display the minor mark of Y-axis

- Settings

True Display the minor mark of Y-axis

False Don’ t display minor mark of Y-axis

- Remarks

Default: True.

◆ **XtNyMinorNum**

Returns/sets the minor number of Y-axis scale when spacing method is ‘ number of division’ or ‘ by unit’ .

- Settings

Spacing method is ‘ number of division’:

It’ s mean the number that one minor scale be divided by minor mark

Spacing method is ' by unit' :

It' s mean the unit value of interval between minor mark and major mark

- Remarks

This resource is valid when *XtNySpacing* is 1 or 2.

◆ **XtNySpacing**

Returns/sets a value that determines the spacing method of ticks mark at Y-axis.

- Settings

Value	Description
0	Automatic
1	Number of division.
2	By unit

- Remarks

Default: 0 - Automatic.

◆ **XtNp#FillMode**

Returns/sets a value that determines the fill method of one plot. The ' #' can be ' 1' to ' 8' . It' s mean the plot identification.

- Settings

Value	Description
0	None, no fill method
1	Fill to 0.0
2	Fill to – Infinity
3	Fill to + Infinity

- Remarks

Default: 0 - None.

◆ **XtNp#FillColor**

Returns/sets a value that determines the fill color of one plot. The ' #' can be ' 1' to ' 8' . It' s mean the plot identification.

- Remarks

Default: Blue.

◆ **XtNp#Interpolation**

Returns/sets a value that determines the interpolation method of graph line of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Settings

Value	Description
0	Direct connect
1	XY, first draw line of X-axis then draw line of Y-axis.
2	YX, first draw line of Y-axis then draw line of X-axis.

- Remarks

  Default: 0 - Direct connect.

◆ **XtNp#LineColor**

Returns/sets a value that determines the line color of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Remarks

  Default: Red.

◆ **XtNp#LineType**

Returns/sets a value that determines the line style of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Settings

Value	Description
0	Solid
1	Dash.
2	Dot

- Remarks

  Default: 0 - Solid.

◆ **XtNp#LineWidth**

Returns/sets a value that determines the line width of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Settings

  The range is 1 ~ 5

- Remarks

  Default: 1.

◆ **XtNp#PointColor**

Returns/sets a value that determines the point color of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Remarks

  Default: Yellow.

◆ **XtNp#PointStyle**

Returns/sets a value that determines the point style of one plot. The ‘ #’ can be ‘ 1’ to ‘ 8’ . It’ s mean the plot identification.

- Settings

Value	Description
0	None
1	Empty square.
2	Solid square
3	Empty diamond
4	Solid diamond
5	Empty circle
6	Solid circle
7	X
8	Cross(+)

- Remarks

  Default: 0 - None.

7.2 Public Function

◆ **XdbChartDraw()**

- Syntax

  Short XdbChartDraw**(***w, pData ,num)*

  XdbChartWidGet w,

  double* p*Data,*

  int num

- Argument

  w : Specifies the Widget

  pData : Specifies a graph data or a array of chart data.

  num : Specifies the num of data

  Return Value

  Zero if the function is successful; otherwise negative number.

  -1, the data type of Data is invalid

  -4, the input active of widget is disable

- Remarks

The data of Data array will be appended to the history buffer of Control.

It always use plot 0 to drawing

◆ **XdbChartDarws()**

- Syntax

  XdbChartDraws(w, pData, plotNum, nData, bInverted)

  XdbChartWidGet w,

  double* p*Data,*

  int plotNum,

  int nData,

  Boolean bInverted,

- Argument

  w : Specifies the Widget

  pData : Specifies a graph data or a array of chart data.

  PlotNum : Specifies the plot number of pData.

  num : Specifies the data number of pData.

  bInverted : Specifies if pData inverted.

  Return Value

  Zero if the function is successful; otherwise negative number.

  -2, the PlotNum is invalid, it must be equal or smaller than XtNp*lotNum*

-3, the dimension of array is invalid, it must be 1 dimension, or element number of Data array is invalid, it must be the multiple number of PlotNum.

-4, the input active of widget is disable