

WEINTEK LABS., INC.

XY Plot

Demo Project

Contents

1. Overview and Operation	1
2. Setting up the Screen	5
3. Addresses	11

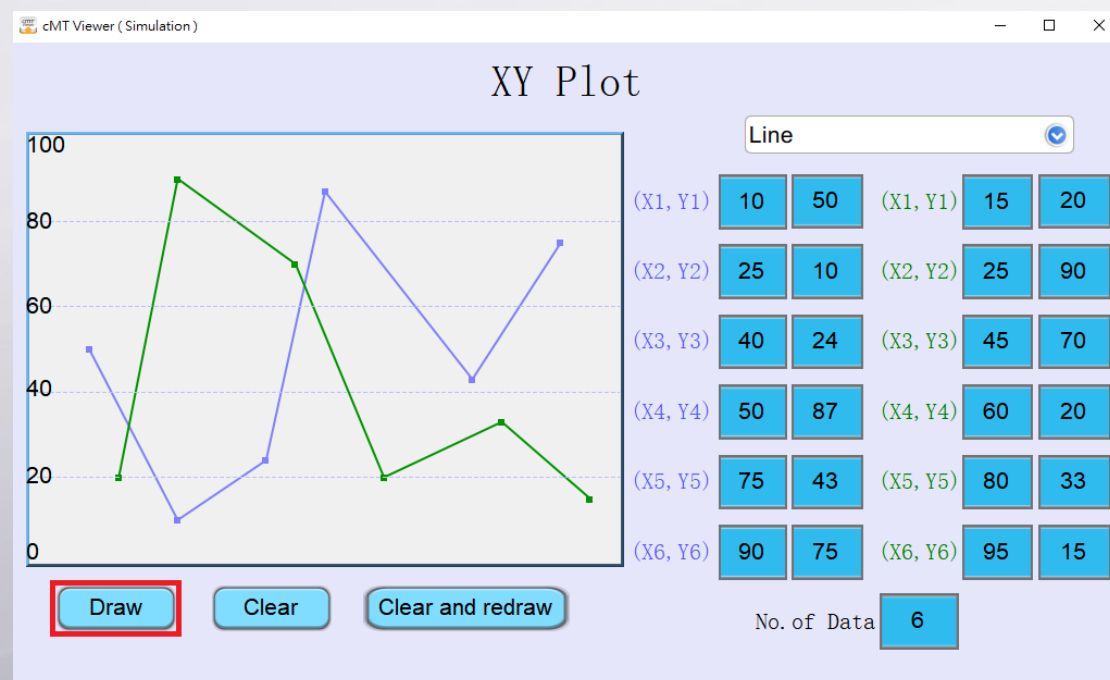
1. Overview and Operation

Overview

This demo project introduces how to use XY Plot object to display values for two variables (X Y coordinates) for a set of data, where the data comes from word registers. Up to 16 channels can be displayed simultaneously, and the style and color of the lines connecting the points can be customized. This object facilitates data observation and analysis. Additionally, negative numbers can also be displayed.

Operation

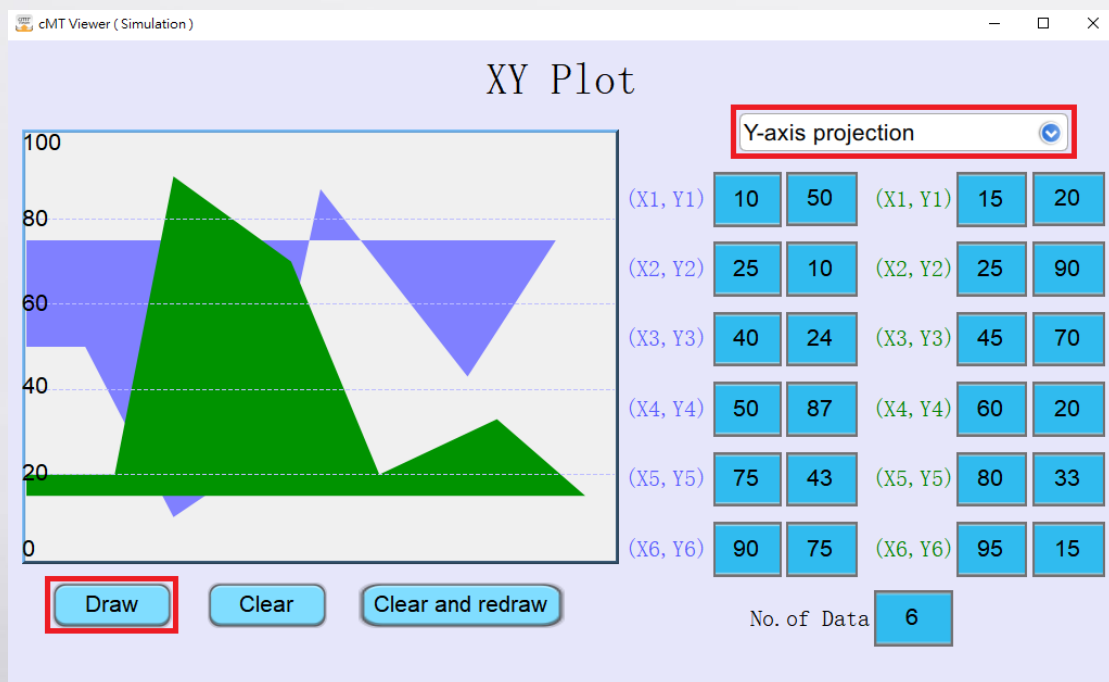
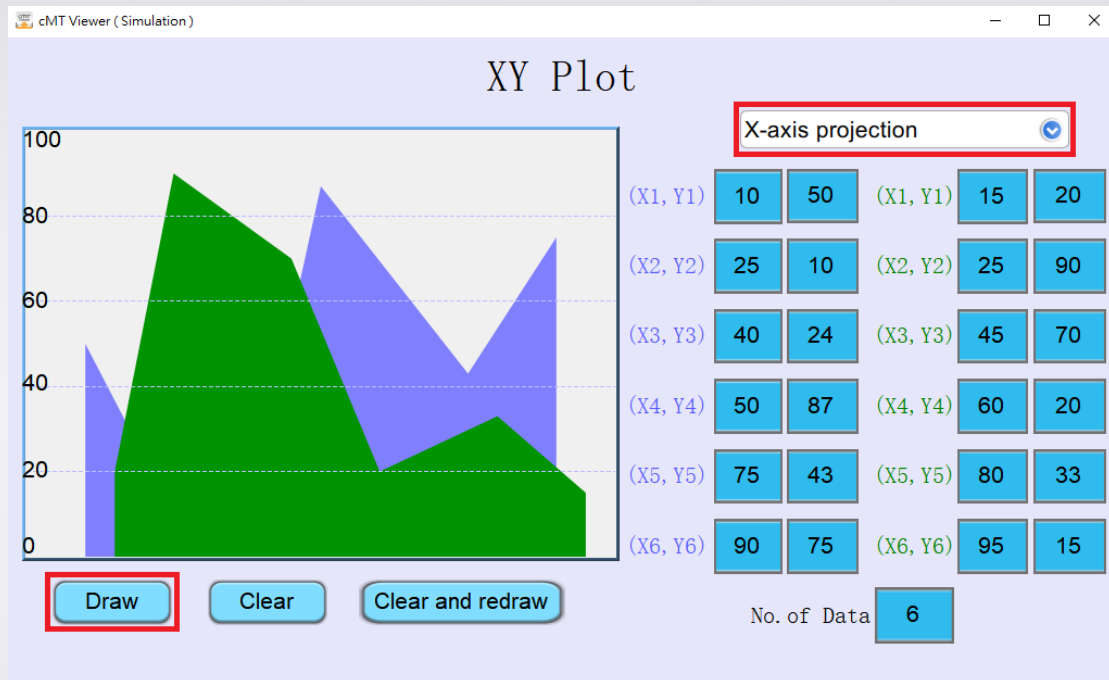
Open and simulate this demo project, press Draw button, and two XY Plot lines drawn according to the coordinates specified on the right-hand side of the window are displayed.

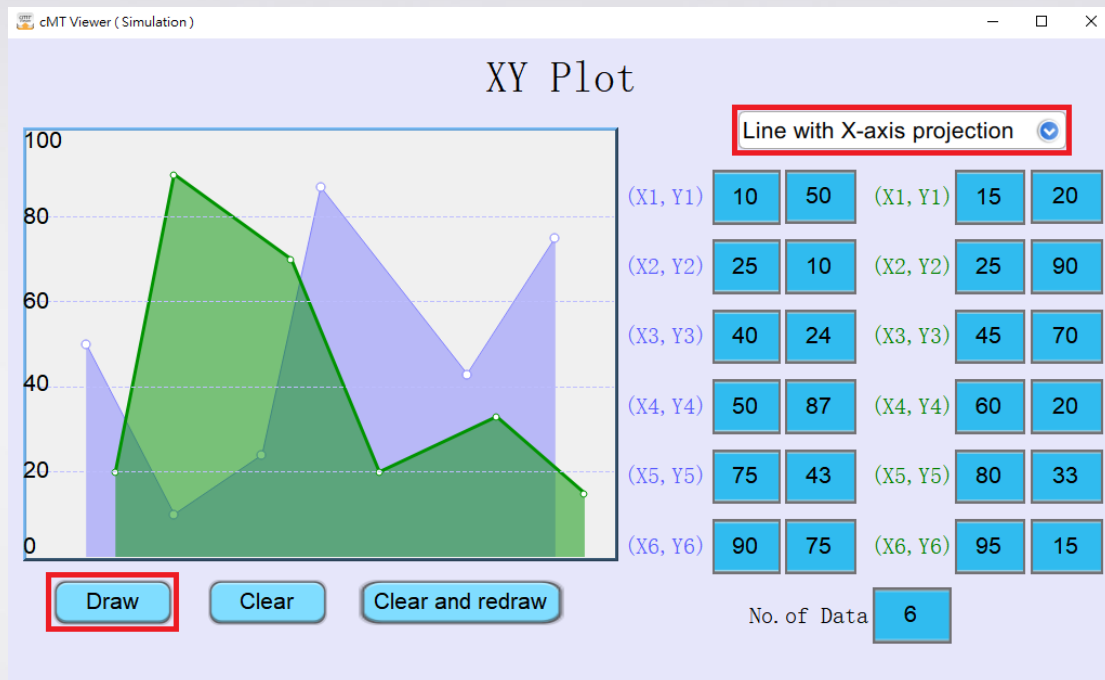


Select a style from the drop-down list in the upper-right corner of the window

and then click Draw button to display different styles of XY Plot.







Changing the coordinates is possible. In this demo project the allowable range for both X and Y axes is 0~100.

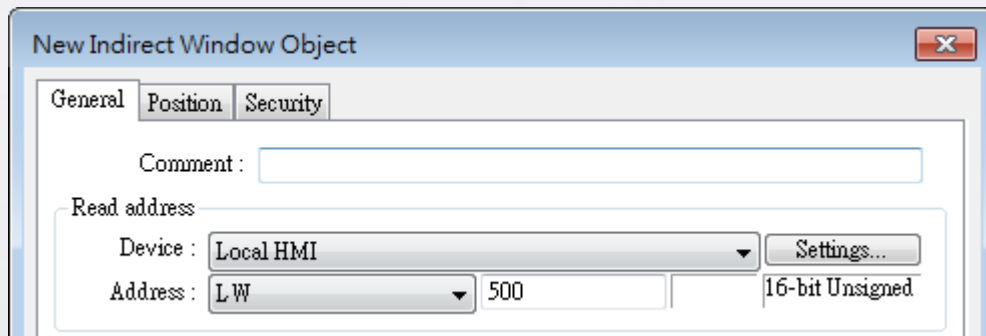
Draw: Keep the former XY Plot and draw a new one.

Clear and redraw: Clear the former XY Plot and draw a new one.

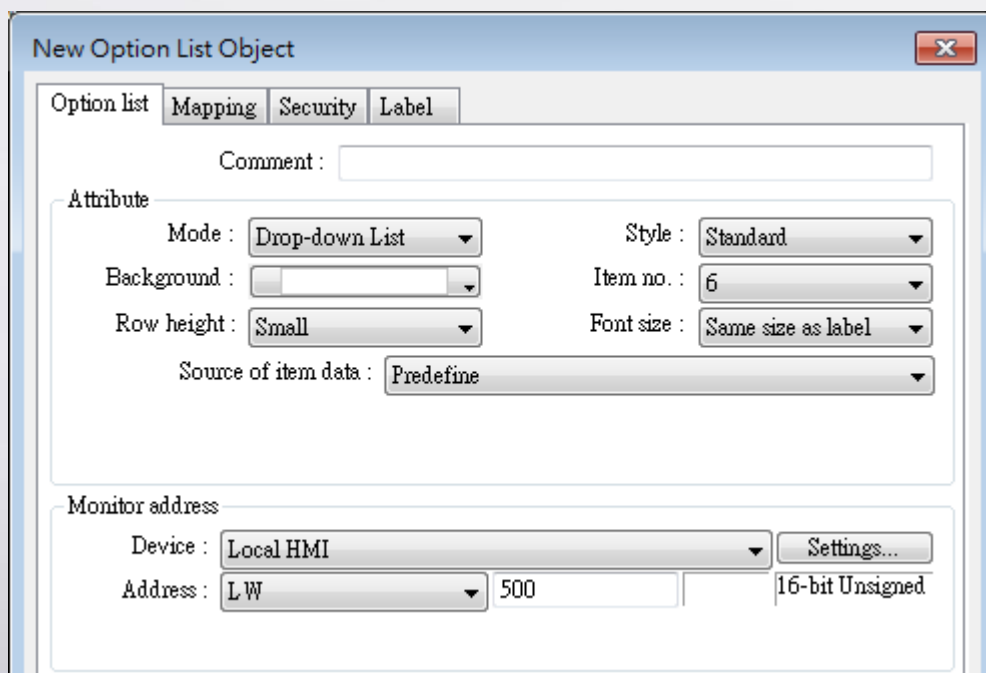


2. Setting up the Screen

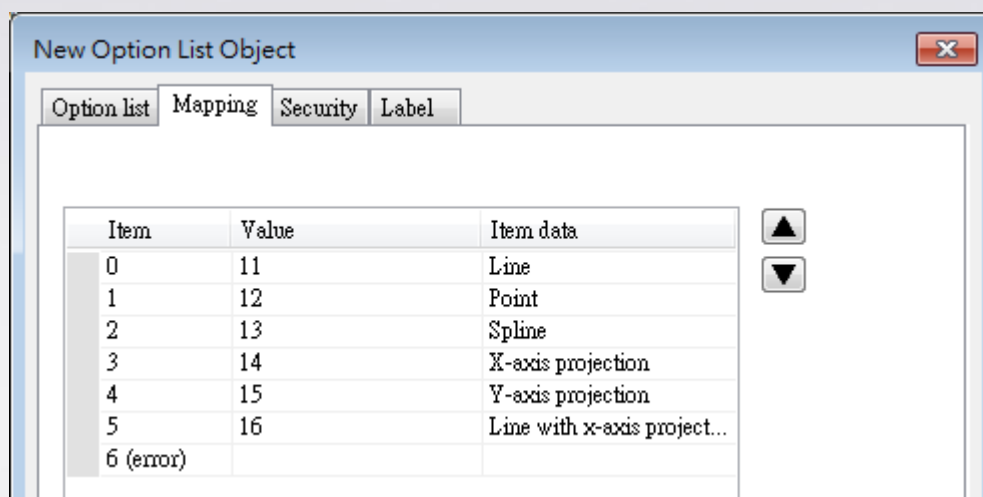
Step 1. Create an Indirect Window object in window no. 10, and set [Read address] to LW-500. This Indirect Window is for displaying different styles of XY Plot.



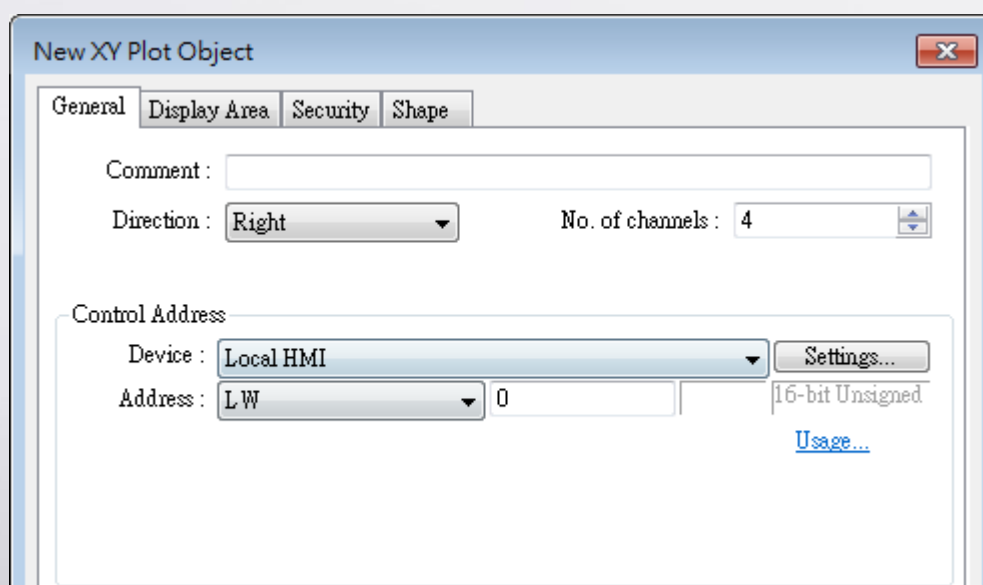
Step 2. Create an Option List object and set [Monitor address] to LW-500.



Step 3. In Mapping tab enter values 11~16, which are window numbers correspond to window no. 11~16. In [Item data] column enter the names of the styles of XY Plot.



Step 4. Create XY Plot object in window no. 11, and select the needed number of channels. Selecting 4 will draw four lines in XY Plot. Set [Control address] to LW-0. See more information by clicking [Usage...].



Set the read addresses and ranges for X data and Y data. The following are settings in this demo project:

Channel 0:

Read address of X data is LW-10, Y data is LW-20

Limit range of X data is 0~100, Y data is 0~100

Channel 1:

Read address of X data is LW-30, Y data is LW-40

Limit range of X data is 0~100, Y data is 0~100

Channel : 0

Read address
Device : Local HMI

☒ Separated address for X and Y data

X data
Device : Local HMI
Address : LW 10 16-bit Unsigned

Y data
Device : Local HMI
Address : LW 20 16-bit Unsigned

Limits
☐ Dynamic limits

X axis
Low : 0 High : 100

Y axis
Low : 0 High : 100

Step 5. In Display Area tab set the style and properties of the XY Plot of each channel.

New XY Plot Object

General **Display Area** Security Shape

Profile color
☐ Transparent

Frame : Background :

Curve
Channel : 0

Maker :

Pen property
Color : 2

Brush property
Point width :

Set Low/High limit and reference lines if needed.

Reference line

☐ Limit from device

Low limit : 0 High limit : 100

☒ Reference line 1 20

☒ Reference line 2 40

☒ Reference line 3 60

☒ Reference line 4 80

Step 6. Add the XY Plot object created in the preceding steps to Window no. 12~16, and select different styles for each window.

New XY Plot Object

General **Display Area** Security Shape

Profile color

☐ Transparent

Frame : Background :

Curve

Channel : 0

Maker :

Pen property

Color : 2

Brush property

Point width :

Step 7. Create Numeric objects in Window no. 10 for displaying and entering XY coordinates and number of data.

The following are settings in this demo project:

Channel 0:

Read addresses of X1~X6 are LW-10~LW-15

Read addresses of Y1~Y6 are LW-20~LW-25

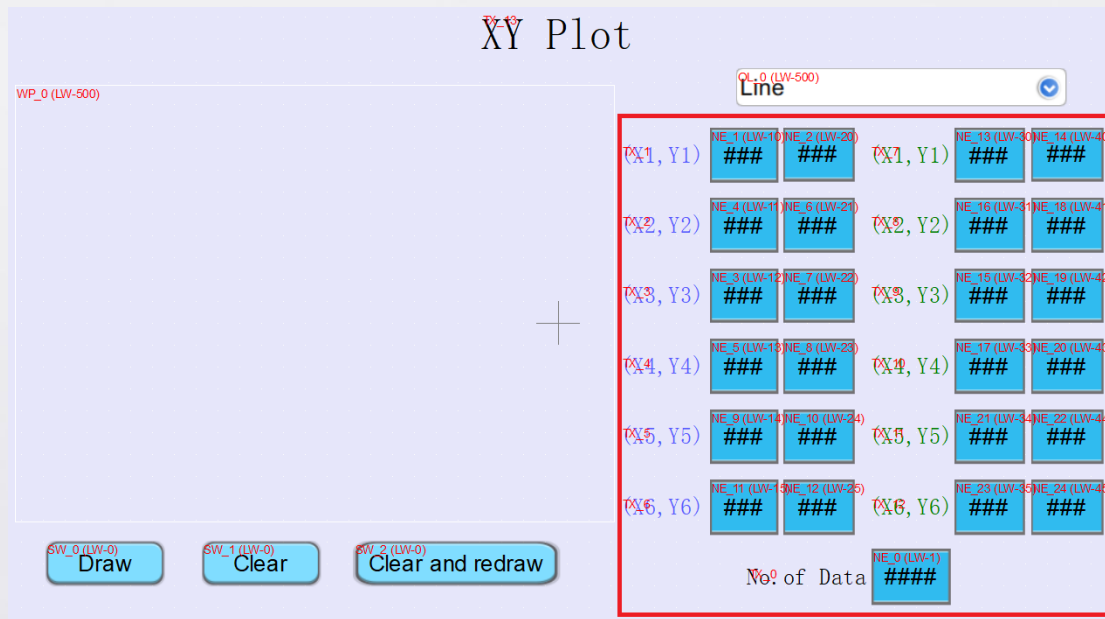
Read address of No. of Data is LW-1

Channel 1:

Read addresses of Y1~X6 are LW-30~LW-35

Read addresses of Y1~Y6 are LW-40~LW-45

Read address of No. of Data is LW-1



Step 8. Create Set Word objects in Window no. 10 to be used as Draw, Clear, Clear and redraw buttons.

Draw: Write constant 1 to LW-0

Clear: Write constant 2 to LW-0

Clear and redraw: Write constant 3 to LW-0

Set Word Object's Properties

General Security Shape Label Profile

Comment :

Write address

Device : Local HMI

Address : LW 16-bit Unsigned

☒ Write after button is released

Notification

☐ Enable

Attribute

Set Style : Write constant value

Set value :

XY Plot

WP_0 (LW-500)

Line

(X1, Y1)	NE_1 (LW-10) #####	NE_2 (LW-20) #####	(X1, Y1)	NE_14 (LW-30) #####	NE_15 (LW-40) #####
(X2, Y2)	NE_4 (LW-11) #####	NE_6 (LW-21) #####	(X2, Y2)	NE_17 (LW-31) #####	NE_19 (LW-41) #####
(X3, Y3)	NE_3 (LW-12) #####	NE_7 (LW-22) #####	(X3, Y3)	NE_16 (LW-32) #####	NE_20 (LW-42) #####
(X4, Y4)	NE_5 (LW-13) #####	NE_8 (LW-23) #####	(X4, Y4)	NE_18 (LW-33) #####	NE_21 (LW-43) #####
(X5, Y5)	NE_9 (LW-14) #####	NE_10 (LW-24) #####	(X5, Y5)	NE_22 (LW-34) #####	NE_23 (LW-44) #####
(X6, Y6)	NE_11 (LW-15) #####	NE_12 (LW-25) #####	(X6, Y6)	NE_24 (LW-35) #####	NE_25 (LW-45) #####

SW_0 (LW-0) Draw SW_1 (LW-0) Clear SW_2 (LW-0) Clear and redraw

No. of Data NE_0 (LW-1) ##### No. of Data NE_13 (LW-1) #####

3. Addresses

The addresses of key objects used in this demonstration are listed below, please adjust as necessary.

Object	Address	Object ID	Description
Window 10			
Set Word	LW-0	SW_0	Draw
Set Word	LW-0	SW_1	Clear
Set Word	LW-0	SW_2	Clear and redraw
Indirect Window	LW-500	WP_0	Displays different styles of XY Plot.
Option List	LW-500	OL_0	Option List for choosing a style.
Numeric	LW-1	NE_0	No. of data of the selected channel.
Window 11~16			
XY Plot	LW-0, LW-10, LW-20, LW-30, LW-40	XY_0	Different styles of XY Plot.