

User Manual

DeviceTalk



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User Manual

DeviceTalk v2.8.1

English

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1. General

DeviceTalk is an easy-to-use industrial software, which can be used for industrial data acquisition and equipment performance tuning.

DeviceTalk software can read and write signals of industrial equipment, display in real time, record and call historical data, etc. The DeviceTalk software can also configure and manage the signals of industrial equipment.

1.1 Main Features

Signal Read & Write:

DeviceTalk can be used to read and write signals.

Trend:

DeviceTalk can display real-time trend of signals, each signal corresponds to a trace; Each trace can be set individually for its color, thickness, type, scatter style, connection type, visibility, etc.;

DeviceTalk can perform basic operations on the trace, including start, stop, pause, clear, etc.; The user can set the coordinate axis.

Data Recording:

DeviceTalk can save and restore displayed data and trace.

Configuration File:

The software introduces the concept of system and device configuration files. When using the software, the first step is to create a configuration file according to the system and device conditions, or to obtain a ready-made configuration file for loading.

In order to facilitate configuration, a device configuration file (.modpar) is introduced, which can save the configuration of a device with modbus interface as a device configuration file (.modpar) .



*modpar format is used to configure the device with Modbus protocol interface.

1.2 File Type

The software defines two file formats, namely .modpar and .wsp. These file formats are described below.

. modpar	device configuration file, used to configure a device to simplify the generation of .das files. It is used to save the configuration information of a device, including signal address, value conversion, units, grouping, communication settings, etc.
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.wsp	workspace file, is used to save the real-time signal status, historical data, etc.

1.3 Supported Industrial Protocols

Currently, the Modbus protocol (Modbus RTU and Modbus TCP) is the only supported communication protocol.

Modbus:

The currently supported Modbus register types include:

- 0* Discrete Output Coils
- 1* Discrete Input Contacts
- 3* Analog Input Registers
- 4* Analog Output Holding Registers

1.4 Registration

The DeviceTalk doesn't require registration.

1.5 Contact Us

If you want to know the latest versions and features, please visit our website, or contact us.

Website: www.devicetalk.io

E-Mail: ping@devicetalk.io

2. Operation Environment, Installation and Copyright

2.1 Operation Environment

Currently only supports Microsoft's operating system, and the supported versions include:

- Windows 8
- Windows 10
- Windows 11

Both the 32-bit and 64-bit versions of the above Windows operating system can be used.

2.2 Installation

Installation-free. Just need to be unzipped.

2.3 Copyright

A description of the copyright of the software is included in the software installation directory. Please do not install or use the software if you do not agree to the copyright of the software.

3. Device Configuration - Modbus (.modpar)

Software provides the device configuration function to create a device configuration file, its content includes:

- 1 - Signal Table
- 2 - Group
- 3 - Settings

Signal Table:

- 1. Defines the basic information of the signal, such as index, name, description, etc.
- 2. Defines the method of reading the signal, such as register and address, I/O data type.
- 3. Define how to convert from I/O value to tag value, such as tag data type, conversion formula (scale and offset), unit, enumeration information, etc.
- 4. Define the restrictions on signal writing, such as read and write permissions, minimum limit value, and the maximum limit value, etc.

Group:

- 1. Signal grouping.

Settings

- 1. Device name.
- 2. Modbus Register related settings

In the software, after the signal is read, it will be converted into tag value according to a certain conversion formula, the operation of the signal, including, writing, saving, displaying, etc., will use the tag value instead of the I/O value.



Note

Signal table settings are mandatory, group and device information are not.

3.1 Menu bar

The menu bar of the software includes the following parts.

File:

Open	Open a saved file.
Save	Save the open document with the same filename
Save As	Save the open document with the specified filename
Close	Close the currently open file
Exit	Exit the current software

View:

Toolbar	Show and hide the toolbar
Status Bar	Show and hide the status bar

Edit:

Add	Used to add or insert new signal items in the signal table.
Delete	Signal item delete Press "ESC" to cancel row selection
Copy	Copy the selected signal item
Cut	Cut the selected signal item
Paste	Paste the selected signal item
Up	The selected signal item moves up
Down	The selected signal item moves down

Settings:

Group	Group settings.
Configuration	Communication settings.

3.2 Toolbar

The icons in the software toolbar are all from the menu bar. For the corresponding explanation, please refer to the explanation in the corresponding menu bar.

3.3 Signal table

Settings	Description	Default	MUST
INDEX	Index information for the signal. The index is different from the address and can be set according to your needs. Example: 1.01 P1.01	-	YES
NAME	Name information for the signal. Example: Act Current	-	YES
ADDRESS	Modbus address The register defined by the Modbus protocol is 16 bits, and the byte order adopts the big endian mode (the most significant byte is sent first). The address setting requires appending the type of register before the register address.	-	YES

	<p>For example: For a register address of 100, if the type of register is Analog Output Holding Registers (4*), then the address to be filled in should be 40100.</p> <p>The types of addresses here include:</p> <p>0* Discrete Output Coils 1* Discrete Input Contacts 3* Analog Input Registers 4* Analog Output Holding Registers</p> <p>In addition to 16-bit data, the software adds support for 32-bit and 64-bit data, as well as support for custom byte orders.</p> <p>At this time, the format of the address can be expressed as: address[quantity]/byte order</p> <p>The byte order uses ABCDEFGH as the byte order of the big endian mode, each letter represents a byte, and it can be set to any order.</p> <p>Example: 40001 40001[1]/BA 40001[2]/DCBA 40001[4]/BADCFEHG</p> <p>40001: Indicates a 16-bit register, the address is 40001; it contains 2 bytes, the byte order is AB, that is, the default big endian mode; int16 or uint16 need to be selected correspondingly in IO datatype.</p> <p>40001[1]/BA: Indicates a 16-bit register, the address is 40001; it contains 2 bytes, and the byte order is BA; int16 or uint16 need to be selected correspondingly in IO datatype.</p> <p>40001[2]/ BADC: Indicates two 16-bit registers, the addresses are 40001 and 40002; it contains 4 bytes, and the byte order is DCBA; int32, uint32 or float32 should be selected correspondingly in IO datatype.</p> <p>40001[4]/ABCDEFGH: Indicates four 16-bit registers, the addresses are 40001, 40002, 40003, 40004; it contains 8 bytes, and the byte order is BADCFEHG; int64, uint64 or double64 should be selected correspondingly in IO datatype.</p>		
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	<p>The parameters in the settings will also affect the address, including the settings for the extended register address and PLC address (offset 1). For details, see chapter 3.5.</p> <table><tr><td>Extended Register Address</td><td><p>If not checked, the address range is like 40000 ~ 49999</p><p>If checked, the address range is like 400000 ~ 465535</p></td></tr><tr><td>PLC Address (Base 1)</td><td><p>Used for conversion from Modbus RTU address to Modbus RTU register.</p><p>If the offset value is 0, the register address corresponding to address 40011 or 400011 is 11.</p><p>If the offset value is 1, the register address corresponding to address 40011 or 400011 is 10.</p></td></tr></table>	Extended Register Address	<p>If not checked, the address range is like 40000 ~ 49999</p> <p>If checked, the address range is like 400000 ~ 465535</p>	PLC Address (Base 1)	<p>Used for conversion from Modbus RTU address to Modbus RTU register.</p> <p>If the offset value is 0, the register address corresponding to address 40011 or 400011 is 11.</p> <p>If the offset value is 1, the register address corresponding to address 40011 or 400011 is 10.</p>		
Extended Register Address	<p>If not checked, the address range is like 40000 ~ 49999</p> <p>If checked, the address range is like 400000 ~ 465535</p>						
PLC Address (Base 1)	<p>Used for conversion from Modbus RTU address to Modbus RTU register.</p> <p>If the offset value is 0, the register address corresponding to address 40011 or 400011 is 11.</p> <p>If the offset value is 1, the register address corresponding to address 40011 or 400011 is 10.</p>						
I/O DATATYPE	<p>Data type of the I/O data。</p> <p>Selectable Settings:</p> <ul style="list-style-type: none">• bool• int16• uint16• int32• uint32• float32• int64• uint64• double64 <p>Generally:</p> <p>For Modbus addresses of 0*, 1*, select bool.</p> <p>For Modbus addresses of 3* and 4*, choose int16 or uint16 according to whether it is signed or not.</p> <p>In addition to 16-bit data, the software adds support for 32-bit and 64-bit data, as well as support for custom byte orders.</p> <p>See ADDRESS for a detailed explanation.</p>	uint16	YES				
SCALE	<p>SCALE and OFFSET are used to define the transformation of signal from the I/O value to the tag value.</p> <p>The converted format is:</p>	1:1	YES				

	<p>Tag Value = I/O value * SCALE + OFFSET</p> <p>In terms of the writing method of the scale, it can be 1:1 or 1.</p>		
OFFSET	Please refer to the description of "SCALE"	0	YES
TAG DATATYPE	<p>Data type of the tag.</p> <p>Selectable Settings:</p> <ul style="list-style-type: none"> • bool • int32 • uint32 • float32 • int64 • uint64 • double64 	float32	YES
UNIT	<p>Unit of the tag.</p> <p>Example: rpm</p>		NO
TYPE	<p>Type of the tag.</p> <p>Selectable Settings:</p> <ul style="list-style-type: none"> • analog • digital • enumerated <p>Type setting has no effect on data acquisition and data conversion. The main effect is on the processing method of the intermediate value of the two samples, which will be used in the data display.</p> <p>If it is set to "analog", a drawing point is calculated by linear interpolation. If it is set to "digital" or "enumerated", value of a drawing point is the next measured value.</p> <p>The enumeration type is a special case of the "digital". For example, the value of the signal can only be "0" and "1", which means "OFF" and "ON" respectively. Then in the software, "OFF" and "ON" will be used in writing and displaying in place of 0 and 1.</p>	analog	YES
READ/WRITE	The readable and writable properties of signals.	RW	YES

	Selectable Settings: <ul style="list-style-type: none"> • RO – Ready Only • RW – Read Write 		
WRITE LIMIT MIN	<p>“Write Limit Min” and “Write Limit Max” are used to alert and limit when data is written.</p> <p>If it's not needed, just leave them blank.</p> <p>The write min limit and write max limit are set according to the tag value, not the I/O value.</p>	-	NO
WRITE LIMIT MAX	Please refer to the description of "Write Limit Min"	-	NO
ENUM STRING	<p>Settings for enumeration information.</p> <p>To set the enumeration information, you need to first select "enumerated" in the type and double-click the enumeration information item in the signal setting, and then set the index and name in the pop-up setting window.</p> <p>Example: Set the index as "0" and "1", the name as "OFF" and "ON" respectively, and get the displayed enumeration information as "OFF=0;ON=1;".</p>	-	NO
DESCRIPTION	A brief description of the signal.	-	NO

3.4 Group

The signals of the device are managed according to the two levels of signal group (Group) and signal item (Item).

Group configuration is divided into two parts, Grouped and Ungrouped. Each signal item must belong to a signal group. For ungrouped signal items, the software will set a signal group automatically by default.

Toolbar:

Add	Add a new signal group
Delete	Delete an established signal group
Edit	Edit an established signal group
Up	The selected signal group or signal item moves up
Down	The selected signal group or signal item moves down


3.5 Settings

Define the information of the device, including the device name.

Define Modbus register related settings. In the current version, the Modbus protocol (Modbus RTU, Modbus TCP) is the only supported protocol.

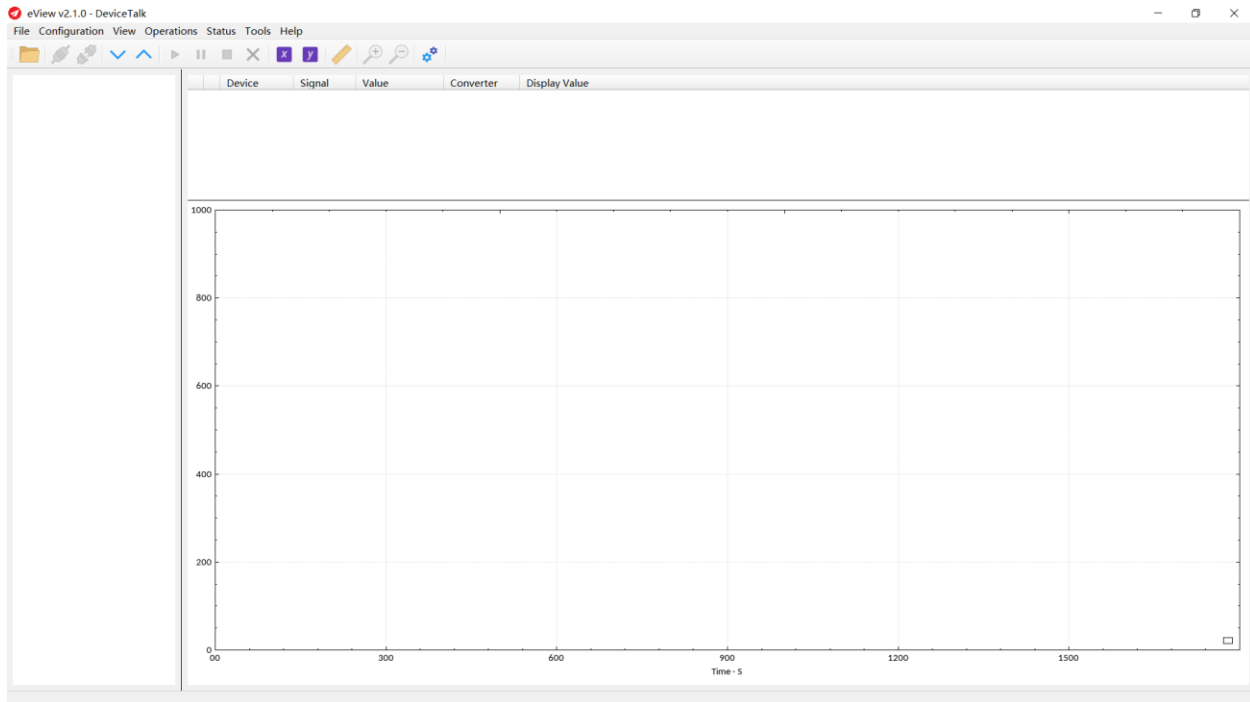
Extended Register Address	If not checked, the address range is like 40000 ~ 49999 If checked, the address range is like 400000 ~ 465535	Default: Unchecked
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PLC Address (Base 1)	Used for conversion from Modbus RTU address to Modbus RTU register. If the offset value is 0, the register address corresponding to address 40011 or 400011 is 11. If the offset value is 1, the register address corresponding to address 40011 or 400011 is 10.	Default: Unchecked
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 Note	When connecting devices from different manufacturers, such as PLC, customer need to set the PLC address (Base 1) according to the actual situation.
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4. User Interface and How to Use

The main interface of DeviceTalk is shown in the figure below.



It can be divided into 6 parts:

- 1 – Title Bar
- 2 – Menu Bar
- 3 – Toolbar
- 4 – Signal module
- 5 – Trend
- 6 – Status Bar

4.1 Title bar

The title bar displays the following sections.

- 1 – Software name
- 2 – The address of the currently open file
- 3 – The registration status of the software, if not registered, it will be displayed

4.2 Menu bar

File:

Open	Open a saved file.
Save Data (* .wsp)	Save all recorded data and other information in wsp format. wsp is a software-defined format and can be opened again with the software.

Save Data (*.csv)	Save all recorded data in csv format. csv is a comma-separated values file format. For DeviceTalk pro only.
Save Graph (*.png)	Save the signal monitor graph of the current display part in png format.
Close	Close the currently open file
Exit	Exit the current software

Device:

Device Configuration	For configuration of the device.
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View:

Toolbar	Show and hide the toolbar
Status Bar	Show and hide the status bar
Legend	Show and hide the legend of plot area

Operations:

Connect	Connect device;
Disconnect	Disconnect from the device;
Expand Signal Groups	Used for signal modules, hide all signal items, only display signal groups.
Collapse Signal Groups	Used for signal modules, showing all signal groups and signal items.
Plot Start	Used for signal monitor. If the plot is paused, continue, if it has stopped, start again.
Plot Pause	Used for signal monitor. After the action is paused, the current data is still being recorded and will not be lost. After restarting, the data recorded during the pause can still be observed.
Plot Stop	Used for signal monitor. After the plot is stopped, the current data will not be recorded.
Plot Clear	Used for signal monitor. For Clearing current plots.
X Axis Settings	Used for signal monitor. For setting the signals of X axis of the coordinate axis;
Y Axis Settings	Used for signal monitor. For setting the signals of Y axis of the coordinate axis;
Marker	Used for signal monitor. Marker is used to assist in monitoring the size of historical data. It only works after plot is paused or stopped. This button can be hidden or monitored by the user. Users can drag the marker to display historical data.
Zoom In	Used for signal monitor. For scaling of the current plot;

Zoom Out	Used for signal monitor. For scaling of the current plot;
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Status:

Active Signals	Active signal table is used to display the information of the current active signals in real time.
Communication Traffic	Communication traffic is used to display the current communication data flow (Tx and Rx) in real time

Tools:

System Settings	Information about system settings, including: 1. default language 2. trace settings
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Help:

Registration	Open Registration interface
About	Open About interface.

4.3 Toolbar

The icons in the software toolbar are all from the menu bar. For the corresponding explanation, please refer to the explanation in the corresponding menu bar.

4.4 Signal Tree

The signal tree is managed in a hierarchical manner of devices, signal groups and signals.

Associated Icons:

The operation icons of the signal module include the following:

- 1 – Collapse all signal groups
- 2 – Expand all signal groups

Mouse Operation:

1. Right click

In the signal module, under the operation of right-clicking, if the row is a signal group, it includes the following functions:

- 1 –Group Properties

If the row is a signal item, include the following functions:

- 1 - Add to Signal monitor
- 2 – Signal write

3 – Item properties

4.5 Trend

The signal monitor module consists of two parts, the upper part is signal monitor key, and the lower part is the plot area.

Associated Icons:

The operation icons of the signal monitor include the following:

- 1 – plot start
- 2 – plot pause
- 3 – plot stop
- 4 – plot clear
- 5 – marker
- 6 – axis x
- 7 – axis y
- 8 – zoom in
- 9 – zoom out

Trend Settings Pane:

The trend settings pane is used to display the current signal status and provide settings for trend display. It's defined as follows:

1	Check	To show or hide the trace
2	Number	The serial number of the trace, the different trace numbers correspond to different colors
3	Name	The name of the signal
4	Actual Value	Real-time value of the signal
5	Converter	Conversion from signal's actual value to display value
6	Display Value	The display value of the signal is obtained by the conversion formula and the actual value.

Mouse operation:

1. Double-click

In the trend panel, the double-click operation can be used to:

- 1 - Set the numeric value of the conversion formula

2. Right-click

In the trend panel, under the right-click operation, the following functions are included:

- 1 - Remove from Trend

4.6 Status bar

The display contents of the status bar include:

1 – connection status

4.7 Axis X

The X axis is the time axis. The X-axis settings include:

- 1 – Axis X length (time-S)
- 2 – Buffer (time-S)

The system default value, the coordinate axis X length is 100 seconds, and the buffer is 1000 seconds.

The buffer represents the retention time of the data in the real time display, and the data exceeding the buffer time will be discarded. The buffer value should be greater than the length of the coordinate axis X when input.

4.8 Axis Y

The setting of the Y axis includes:

- 1 – Y Axis Max
- 2 – Y Axis Min

The system default value, the maximum value of the coordinate axis Y is 2000, and the minimum value of the coordinate axis Y is -2000.

The value of Y Axis Max should be greater than the Y Axis Min when input

4.9 Communication settings

By clicking the data acquisition node level of the device tree, you can set the data acquisition node. In the current version, the Modbus protocol (Modbus RTU, Modbus TCP) is the only supported protocol.

Modbus RTU:

COM Port		
Port Name	COM Port name	Default: COM1
Baud Rate	Support value: <ul style="list-style-type: none">• 1200• 2400• 4800• 9600• 19200• 38400• 57600• 115200 Unit is bps.	Default: 9600
Data Bits	Support value:	Default: 8

	<ul style="list-style-type: none"> • 8 	
Parity	Support value: <ul style="list-style-type: none"> • NONE • EVEN • ODD 	Default: NONE
Stop Bits	Support value: <ul style="list-style-type: none"> • 1 • 2 	Default: 1

Modbus RTU Server

Slave Address	Slave address of the device, Range: 0~255	Default: 1
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Modbus RTU Client

Timeout(ms)	Timeout time of the slave when the master station queries, the unit is millisecond.	Default: 500
Poll Delay(ms)	After a query is over, the next query will be executed after a delay of the set time, the unit is millisecond.	Default: 20

Modbus TCP:

Modbus TCP Server

IP Address	IP address of the device interface to be connected	Default: 127.0.0.1
Port	Port of the device interface to be connected	Default: 502

Unit ID	The unit identifier of the device as a slave	Default: 0
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Modbus TCP Client

Timeout(ms)	Timeout time of the slave when the master station queries, the unit is millisecond.	Default: 500
Poll Delay(ms)	After a query is over, the next query will be executed after a delay of the set time, the unit is millisecond.	Default: 20

4.10 System settings

The system settings include:

- 1 – Language
- 2 – Trend Trace Properties
- 3 – Trend Trace Connection Method

Language:

The languages supported by the current version of the software include:

- 1 – Chinese
- 2 – English

Trend Trace Properties:

Each trace can be set individually for its color, thickness, type, scatter style, connection type, visibility, etc.;

Also, default settings can be restored.

Trend Trace Connection Methods:

For different types of signals, digital and analog, different connection methods between the sampling points on the trace are provided:

- Interpolation. A drawing point is calculated by linear interpolation.
- Nearest. Value of a drawing point is the nearest measured value.
- Leading. Value of a drawing point is the next measured value.
- Lagging. Value of a drawing point is the previous measured value.

4.11 Registration

Register for registration of the software.

In the case of unregistered, the registration interface will display the identification code of the machine, and the registration code of the software will be required.

In the case of registered, the registration interface will display the registered information.

After the registration is complete, you need to restart the software.

4.12 About

About interface includes:

- 1 – information of the software
- 2 – Contact information

5. Quick start guide

The following is a brief description of the basic use of the software.

1	<p>Generation of device configuration file.</p> <p>Before using the software for real-time monitoring of data, it is necessary to configure the device to obtain a configuration file in the format of modpar.</p> <p>Configure the signal table and, and then configure the group and device information, and modbus register settings.</p>	See "Chapter 3 System Configuration"
2	<p>Open the device configuration file whose configuration format is modpar in the main interface</p> <p>In the signal module on the left, you will see a list of signals arranged by group and item.</p>	See "Chapter 4 User Interface and How to Use"
3	<p>communication settings</p> <p>Click communication setting button, and configure the communication settings.</p>	See "Chapter 4 User Interface and How to Use"
4	<p>Connect and disconnect devices</p> <p>Click the "Connect" and "Disconnect" buttons in the main interface to connect the device and disconnect from the device.</p>	See "Chapter 4 User Interface and How to Use"
5	<p>Add and remove signal monitor signals</p> <p>The method of adding a signal to the signal monitor is to select the signal in the signal module, and right-click to select "Add to signal monitor" to add it. Or by double-click.</p>	See "Chapter 4 User Interface and How to Use"
6	<p>Signal write</p> <p>Select this signal in the signal module, and right-click to select "Signal Write" to write data.</p> <p>If the signal configuration contains writable maximum and minimum values, the maximum and minimum values will also be displayed and limited.</p>	See "Chapter 4 User Interface and How to Use"
7	<p>Signal monitor of signals</p> <p>Through the provided actions, you can start, pause, stop, and clear the plot.</p>	See "Chapter 4 User Interface and How to Use"

	<p>The marker is a straight line and can be used to move and observe a certain point on the trace when the trace is paused or stopped.</p> <p>The value of X-axis setting, and Y-axis setting are used for the setting of the coordinate axis.</p> <p>The zoom-in and zoom-out functions can be used to manually adjust the coordinate axis of the drawing.</p>	
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Here's an example to illustrate how the software works.

The test software is a simple signal generator that generates sine and square wave signals and provides a communication interface (Modbus Server) for signal setting and real-time signal reading.

Step 1: Modbus signal table of the device

40101 and 40102 are actual values for sine wave signal and square wave signal;
41001-41003 are the enable, amplitude, and period settings of the sine wave signal;
41004-41006 are the enable, amplitude, and period settings of the square wave signal.

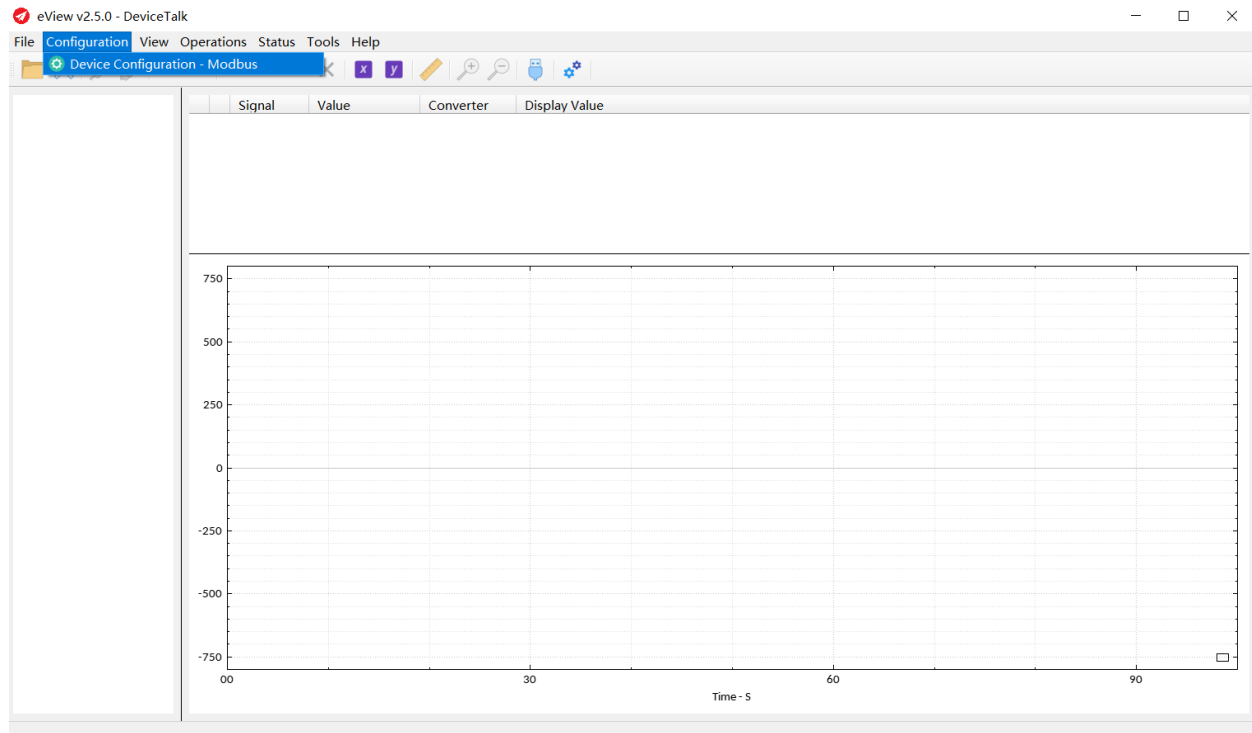
Modbus register	Name
40101	Sine Wave Actual Value
40102	Square Wave Actual value
41001	Sine Wave Enable
41002	Sine Wave Period
41003	Sine Wave Amplitude
41004	Square Wave Enable
41005	Square Wave Period
41006	Square Wave Amplitude

For each signal, it is also necessary to know the format of its communication value, the conversion method from the communication value to the actual value, the format of the actual value, the read/write property of the signal, and so on.

Step 2: Generation of the device configuration file

configuration ui:

Click "Configuration" and then "Device Configuration - Modbus".



The screenshot shows the Device Configuration - Modbus v2.0 application window. The menu bar includes File, View, Edit, and Settings. The toolbar contains icons for file operations, zooming, and settings. The main window displays an empty table with the following columns:

INDEX	NAME	ADDRESS	I/O DATATYPE	SCALE	OFFSET	TAG DATATYPE	UNIT	TYPE	READ/WRITE	WRITE LIMIT MIN	WRITE LIMIT MAX	ENUM STRING	DESCRIPTION
-------	------	---------	--------------	-------	--------	--------------	------	------	------------	-----------------	-----------------	-------------	-------------

Next, setting the signal table, group, and settings in turn.

Signal Table:

Add rows in turn and set the signal as follows:

Device Configuration - Modbus v2.0

File View Edit Settings

INDEX	NAME	ADDRESS	I/O DATATYPE	SCALE	OFFSET	TAG DATATYPE	UNIT	TYPE	READ/WRITE	WRITE LIMIT MIN	WRITE LIMIT MAX	ENUM STRING	DESCRIPTION
1.01	Act Sine Wave Value	40101	int16	1:1	0	float32		analog	RO				
1.02	Act Square Wave Value	40102	int16	1:1	0	float32		analog	RO				
10.01	Sine Wave En	41001	uint16	1:1	0	uint32		enumerate	RW			0=OFF;1=ON;	
10.02	Sine Wave Period Ref	41002	uint16	1:1	0	uint32		analog	RW				
10.03	Sine Wave Amplitude Ref	41003	uint16	1:1	0	uint32		analog	RW				
10.04	Square Wave En	41004	uint16	1:1	0	uint32		enumerate	RW			0=OFF;1=ON;	
10.05	Square Wave Period Ref	41005	uint16	1:1	0	uint32		analog	RW				
10.06	Square Wave Amplitude Ref	41006	uint16	1:1	0	uint32		analog	RW				

Group:

The configuration of the group is optional and not required.

Grouping will facilitate the management of signals, and after grouping, a three-layer structure of "device - signal group - signal item" will be formed.

Device Configuration - Modbus v2.0

File View Edit Settings

INDEX	NAME	ADDRESS	I/O DATATYPE	SCALE
1.01	Act Sine Wave Value	40101	int16	1:1
1.02	Act Square Wave Value	40102	int16	1:1
10.01	Sine Wave En	41001	uint16	1:1
10.02	Sine Wave Period Ref	41002	uint16	1:1
10.03	Sine Wave Amplitude Ref	41003	uint16	1:1
10.04	Square Wave En	41004	uint16	1:1
10.05	Square Wave Period Ref	41005	uint16	1:1
10.06	Square Wave Amplitude Ref	41006	uint16	1:1

Group

Grouped	Ungrouped
01: Actual Signals	
1.01: Act Sine Wave Value	
1.02: Act Square Wave Value	
10: Parameters	
10.01: Sine Wave En	
10.02: Sine Wave Period Ref	
10.03: Sine Wave Amplitude Ref	
10.04: Square Wave En	
10.05: Square Wave Period Ref	
10.06: Square Wave Amplitude Ref	

Settings:

Device Configuration - Modbus v2.0

File View Edit Settings

INDEX	NAME	ADDRESS	I/O DATATYPE	SCALE
1.01	Act Sine Wave Value	40101	int16	1:1
1.02	Act Square Wave Value	40102	int16	1:1
10.01	Sine Wave En	41001	uint16	1:1
10.02	Sine Wave Period Ref	41002	uint16	1:1
10.03	Sine Wave Amplitude Ref	41003	uint16	1:1
10.04	Square Wave En	41004	uint16	1:1
10.05	Square Wave Period Ref	41005	uint16	1:1
10.06	Square Wave Amplitude Ref	41006	uint16	1:1

Settings

Name: Signal Generator

Modbus register settings

Parameter	Value	Default Value	Unit	Description
Extended Register Address	<input type="checkbox"/>	0	-	Modbus extended address. If not ...
PLC Address (Base 1)	<input type="checkbox"/>	0	-	Modbus address to Modbus register ...

Ok Cancel

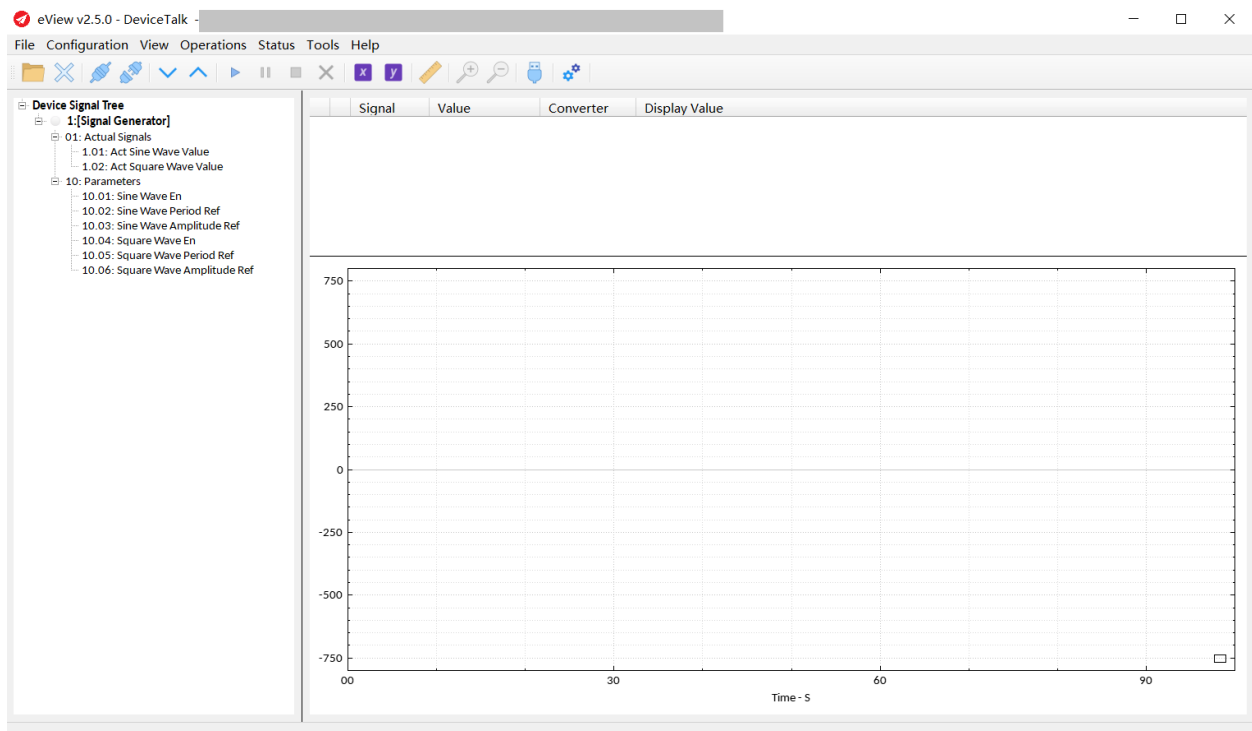
You can enter the name of the device here, as well as the Modbus register related settings, it is important to note here that the Modbus register address of some devices has a offset(base 1), if there is an offset, you need to check the box.

Save:

Click the Save button to save the settings as a file in modpar format.

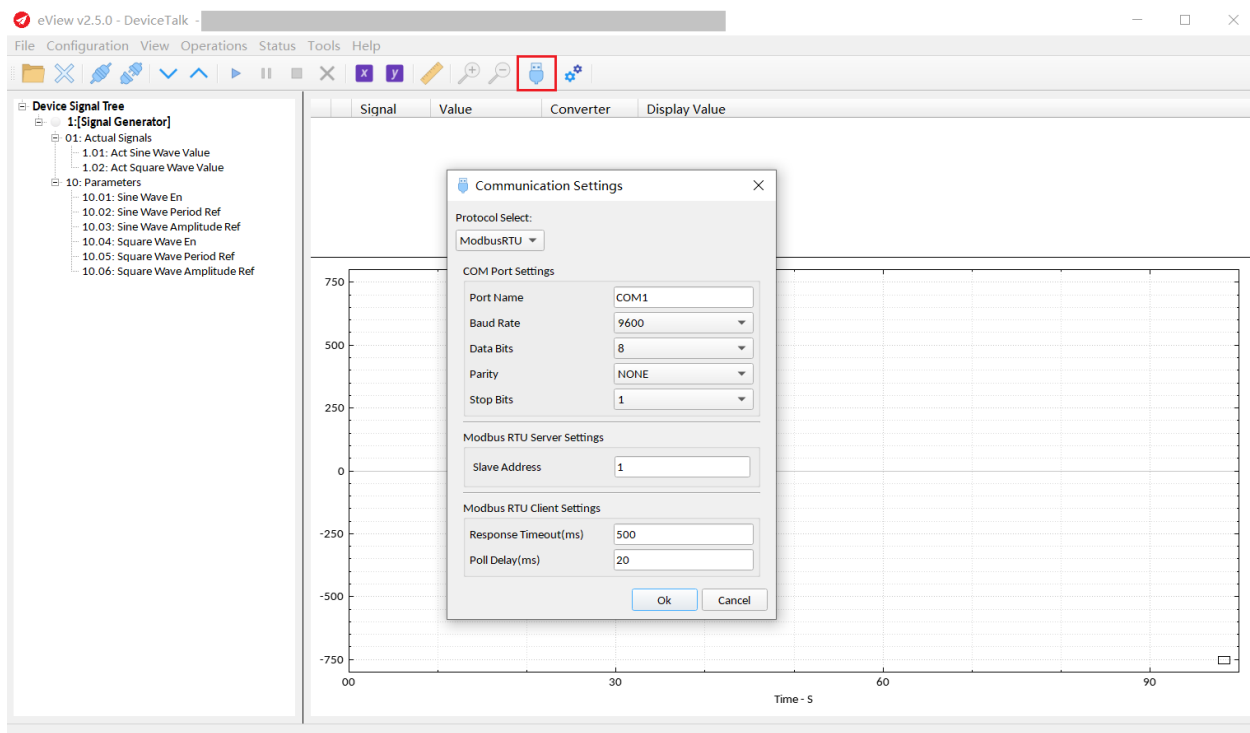
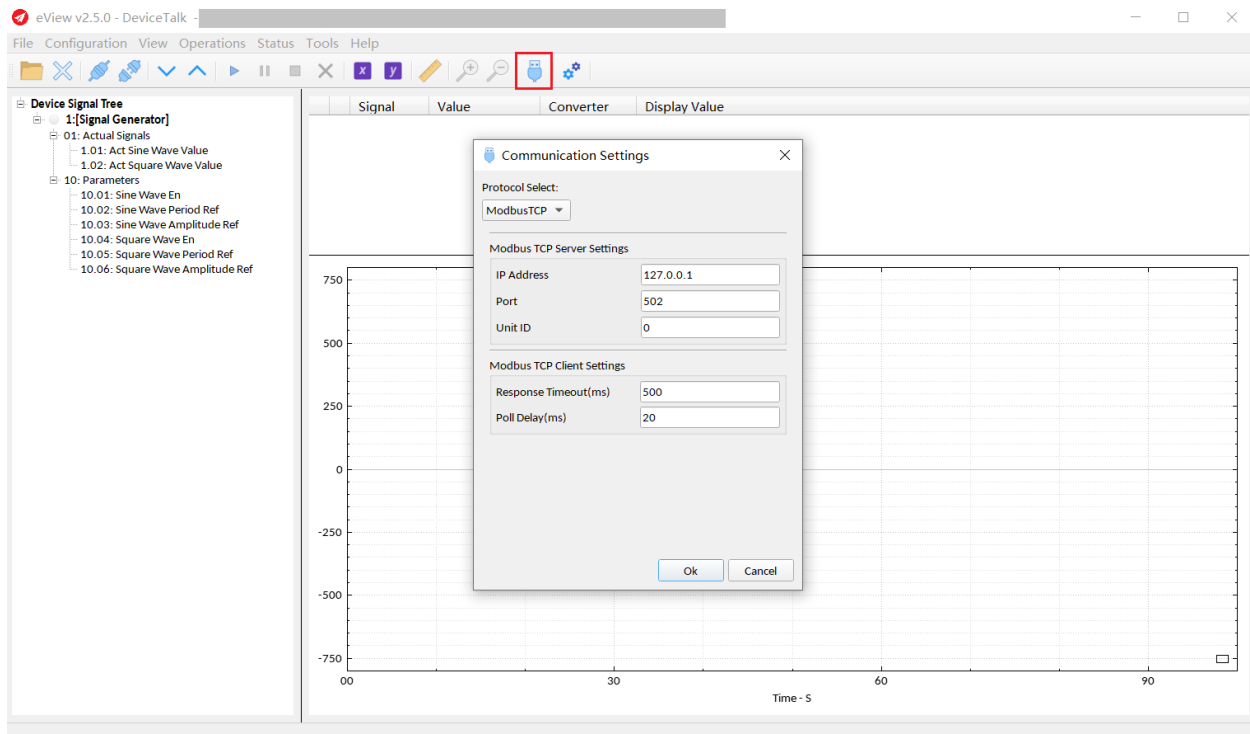
Step 3: Load and Use the Device Configuration File

Load .modpar File:



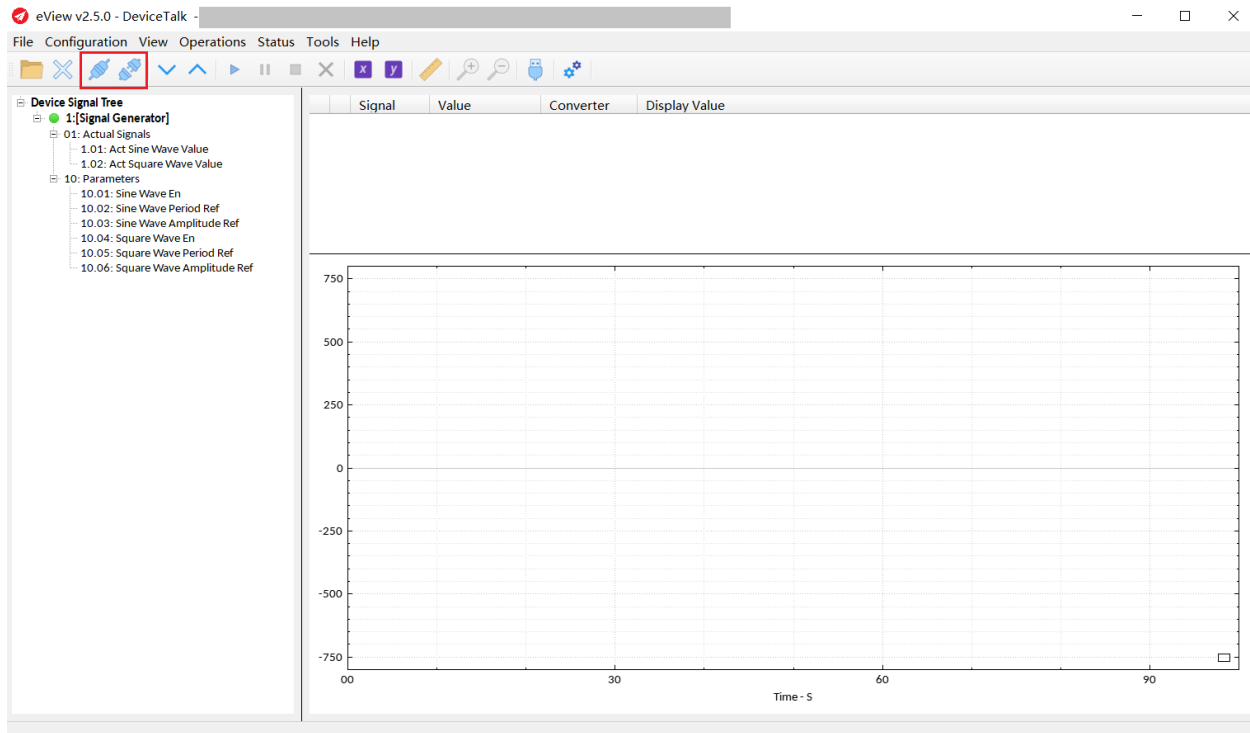
Communication Settings:

Click the Communication Settings button to enter the Communication Settings. Here, you can select the Modbus RTU or Modbus TCP protocol and set it up.



Connect and Disconnect:

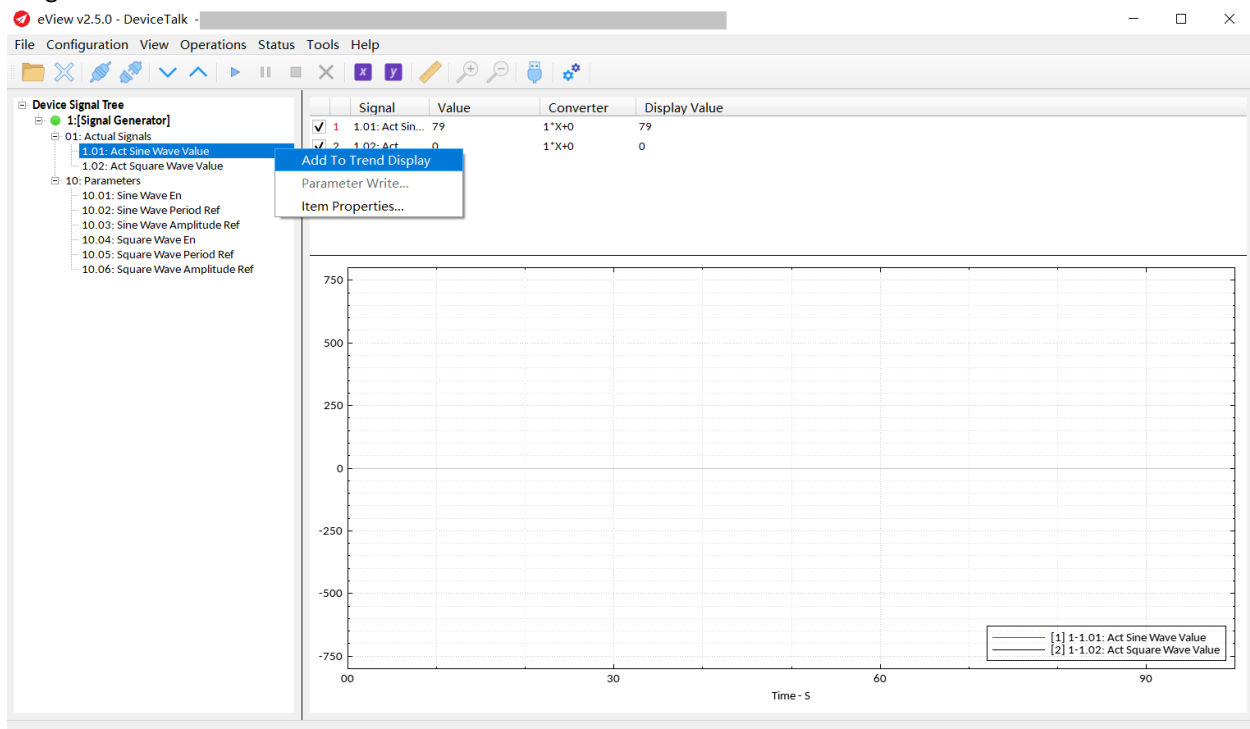
Click the Connect or Disconnect button to connect or disconnect the device.



Add signal to the trend:

By double-clicking on the signal on the signal tree or by right-clicking and "Add to Trend".

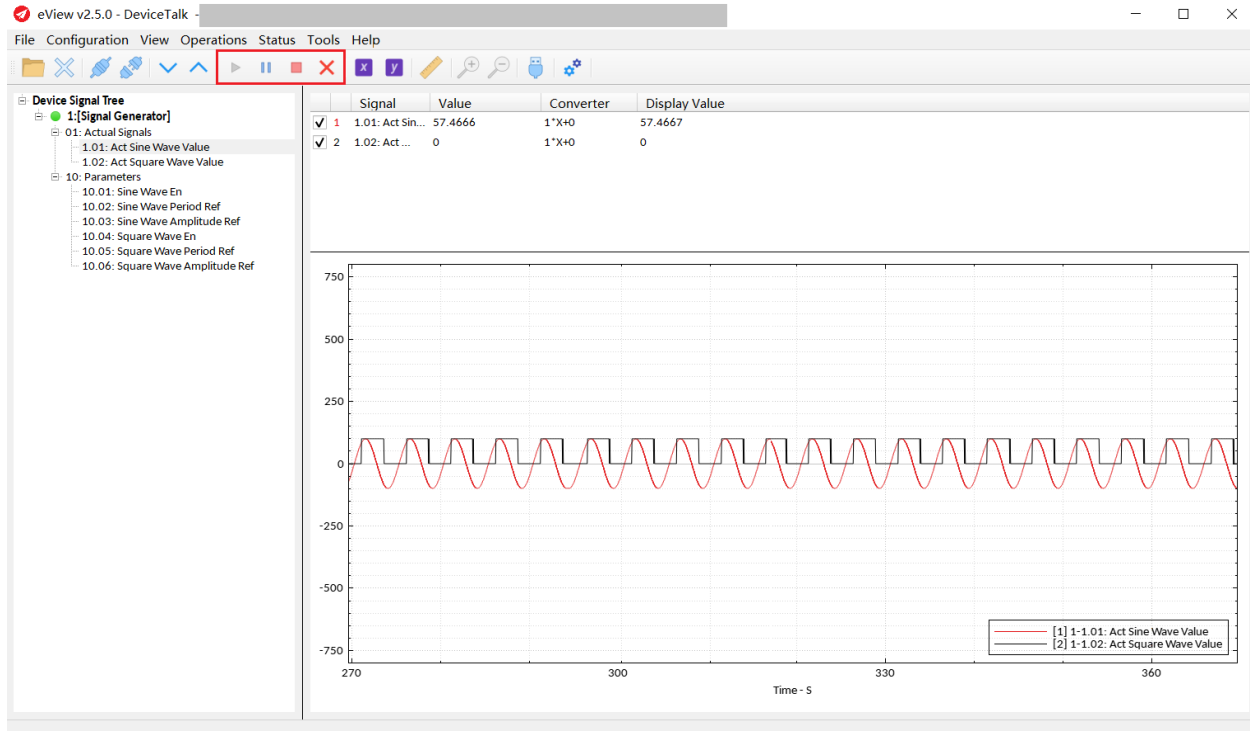
2 signals are added to the trend.



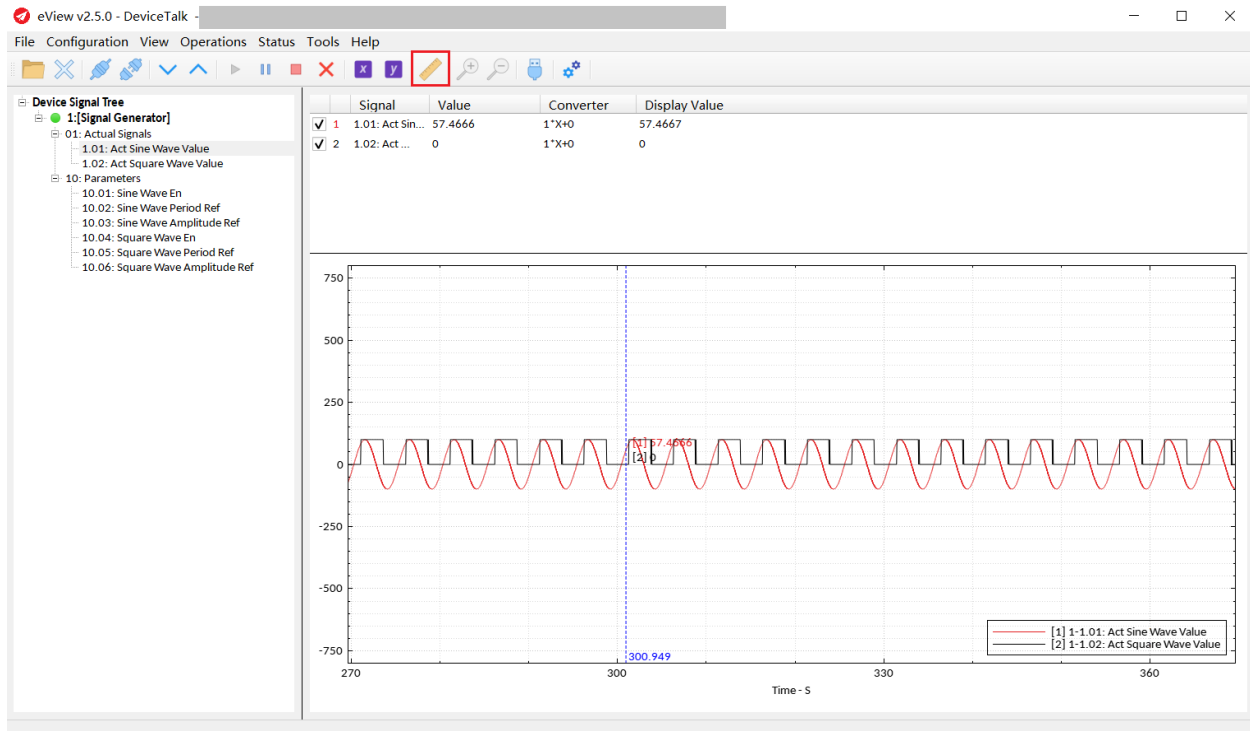
Trend:

Start, pause, stop and clear the trend can be controlled by clicking buttons “Plot Start”, “Plot Pause”, “Plot Stop”, and “Plot Clear”.

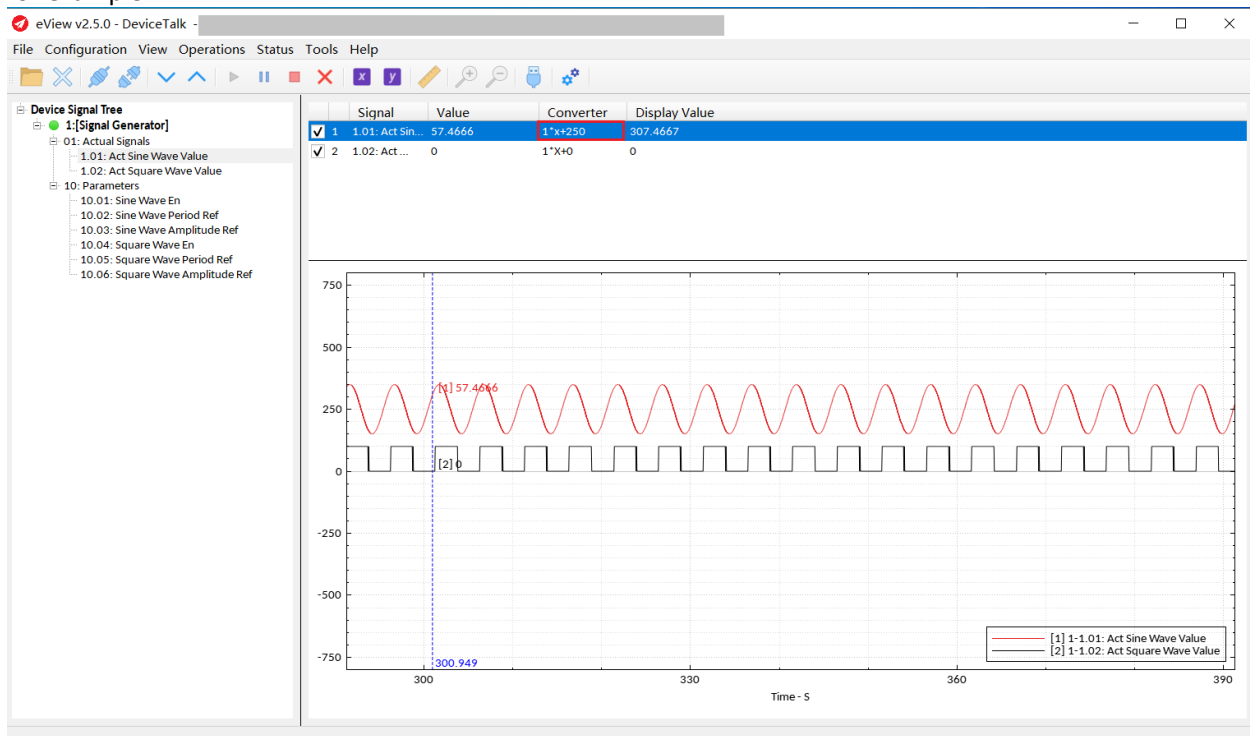
The X and Y axes can be set by clicking buttons “X-Axis Settings” and “Y-Axis Settings”.



Usage of Marker:



If the display traces overlap, you can adjust the position of the display position for each signal by “converter”, for example:



Signal Write:

Right-click the signal and select "Signal Write...", the dialog box for writing the signal will be displayed, and then you can edit the signal.

Usually this will be a text editor, but the type of this signal is enumeration, so here is a drop-down menu for easy use.

