SV3000

Dynamic data monitoring system software

http:// www.sonbus.com

Software Overview

Popular industrial control usually PLC and DCS control system, and both have their own limitations. With the development of computer technology, the emergence of the configuration software, the open, flexible and versatile control, quickly showing strong vitality, has been widely used in various control systems, increasing market share. However, smaller applications, which by way of business and price points, so that customers stay away. In order to make monitoring easier, we have developed the SV3000 series software, low cost, fast and efficient is the principle of the software design. SONBEST dynamic data monitoring system software SV3000 is SONBEST module or instrument better user-friendly and developed specialized monitoring software. For the convenience of users to quickly grasp and understanding of the Software Development Division I offers a range of screen tutorial.

Note:

Software due to the need, will continue to upgrade, if the software does not match with the manual, software description shall prevail. Export Data feature of this product must be installed OFFICE2003 EXCEL or earlier, does not support OFFICE2007 or later. If you use OFFICE2007 or later, use the Export TXT file format and then import the EXCEL spreadsheet.

Software Environment

SV3000 can be installed on windows xp, windows 8, window 7 64-bit platforms, but need to install office2003 version. Software for the hardware configuration requirements low, hard disk space is larger than 1G, memory is greater than 1G, CPU and single-core or more.

Use of software

The software is divided into the demo version, commercial version, and OEM version.
[Demo version] This version allows users to quickly, true, comprehensive understanding of software functionality, interface, and features. The fundamental difference between this version and the other version is that this version is no communication function, cannot be set up and modify the configuration.
[Business] Business Edition has a full-featured, 256 measuring points. There are after-sales service and technical support.
[OEM] version of the software according to user needs to develop customized version of the software, users only pay for custom or supporting the use of large customers.

Software licensing and copyright notice

Software installation and use matters needing attention

1. WIN7 users please use compatible XP SP3 mode and administrator status to install the software.
2. Please use OFFICE2003 version of the office software, or data cannot be exported normally.
3. Software, it is recommended that the installation directory under the data.mdb rename, so that the software re-database

Software Installation

After downloading the software, unzip the package, you can see "SV3000.exe" file, double-click to install (subdivision software name will be different, such as "SV3000-SC1200B temperature measurement system commercial version. Figure 1 shows:

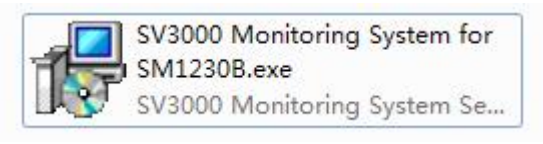
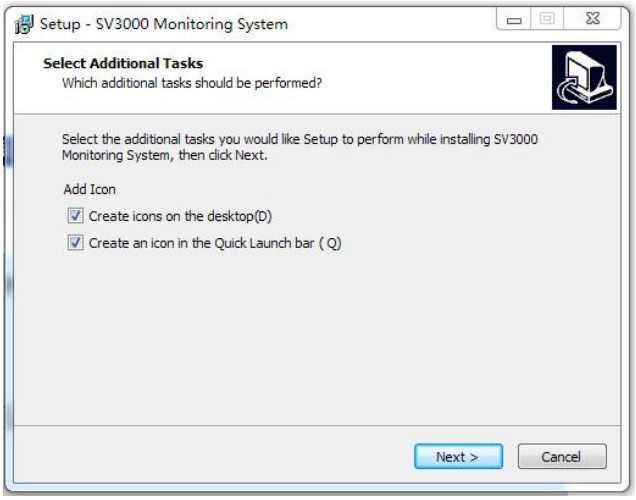


Figure 2.1 Software running icon

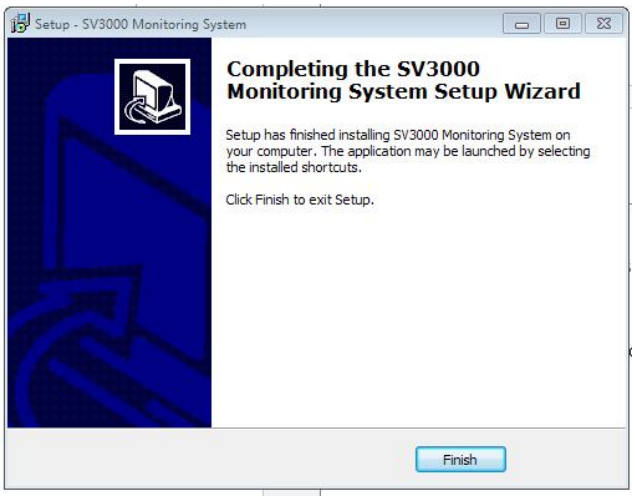
Double-click, click Next.

Select the appropriate installation path.



Click [Next] three times to complete the installation.

If the installation process, 360 and other security software prompted the warning, please click to allow this operation, the software guarantees no viruses or Trojans.



After the successful installation of the software interface

After the software is successfully installed, it will automatically generate shortcuts on the desktop or in the vicinity of the generated menu bar.

As shown, we can double-click the icon 

on the desktop to run the software.

Software default installation location is: "C: \ Program Files (x86) \ SV3000 Sambo environment online monitoring system"

Software instructions

3.1 Column description

The main interface of the software is shown as below:

Software main interface

Software is divided into measuring points list, run the screen, real-time curve, historical curve, data reporting, software settings, and several other major sections.

【Main Interface】 is a navigation panel, allowing users to easily switch to the various operator interface.

【Data List】 The list of measuring points will be displayed, and the built-in debugging function will let the user get familiar with the hardware system quickly.

【Operation Display】 is a configuration screen and real-time data display, configuration screen users can change.

【Real-time curve】dynamic display curve trends, real-time display of up to 8 points in real-time curve.

【Data Report】can view the historical data, can also lead the data into EXCEL form way.

【Software Settings】 Used to set communication, module, measuring point and configuration screen and other information.

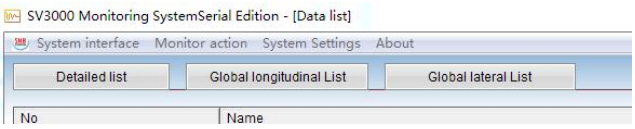
3.2 Software Licensing

In order to better serve the user search Bo, the software used in conjunction with the way the computer hardware licensing. One set of software is limited to one computer. After the software installation, double-click the software icon, enter the software, the pop-up 【SV3000 software authorized to identify】 interface.

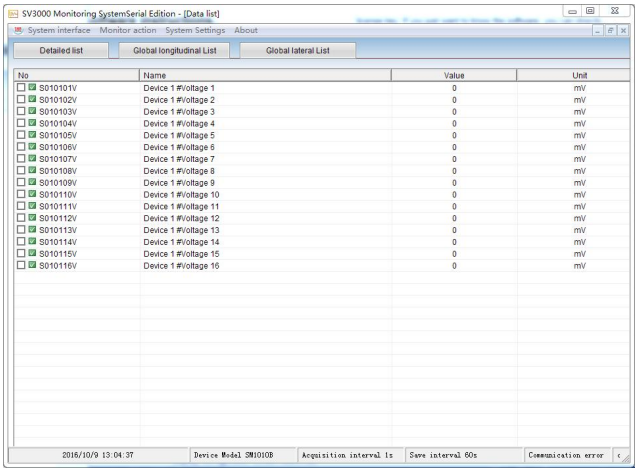
For the SONBRST product user or normal version of the customer, you can directly apply to the salesperson software license key. If you just want to know the software, you can directly enter the demo mode.

3.3 Data list

【Data List】can display real-time data of all measuring points and display them in the form of list. For the convenience of user's observation and use of data, the list is divided into "Detailed list", "Global longitudinal list" and "Global lateral list". Switch the way as shown:

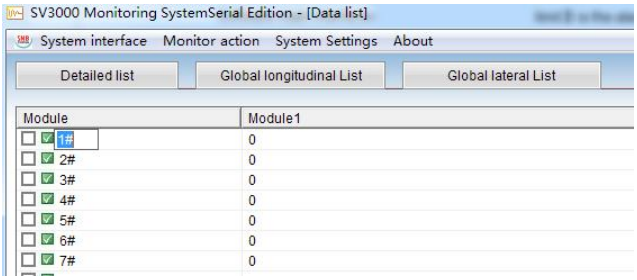


【Detailed list】to measure the address, name, measurement, unit, etc. For the header. Throughout the survey point information and data. Such as the interface, the normal collection will be numbered, name, measured value, unit, upper limit, lower limit, upper and lower limits, correction value, time, date. 【Upper limit】, 【Lower limit】is the alarm state, it is the state judgment after comparing the current measured value with 【upper and lower limit value】.

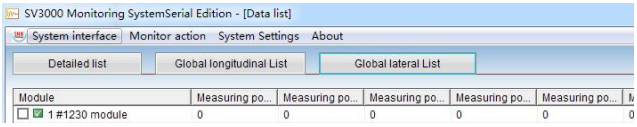


Detailed measurement point list mode

【Global longitudinal list t】 This list mode is used to display all the measurement points in the vertical direction. It is commonly used in multi-module to compare data.

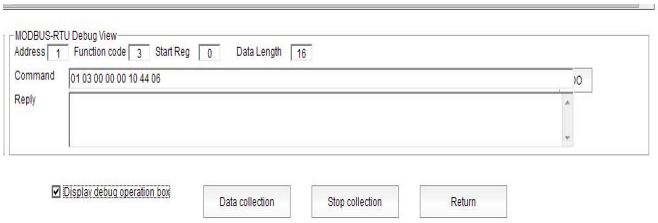


【Global lateral list】This list mode displays all measured data horizontally, which is used to compare the actual measured data of the same position.



3.4 Debugging function

In the list of measurement points, built-in debugging function, allowing users to MODBUS-RTU protocol and hexadecimal commands to quickly check the hardware can be checked.



As shown in Figure, you can check the "Display debugging operation box", you can see the MODBUS-RTU command debugging box.

MODBUS-RTU command debugging box has the device address, function code, starting address, data length and so on.

【Address】 is the device ID of the current operation. The value range is 1-35.

【Function code】 Query the input register's command code, generally 3, do not modify,

【Start Reg】 Query all data generally from 0 to start, if inquires the data of a certain position, can input corresponding number.

【Data length】 The number of data to be queried in the current device.

Debugging process, you can manually modify the above items, click【manual acquisition】 can see the reply command. If there is no response to check the hardware or communication interface.

【Manual】 If the hardware connection is normal, the serial port configuration is also normal, click this button, the device should be on the RX indicator flashes. If not, check the hardware. After the device responds, the software can parse the data into the current measurement.

【Data collection】 If the debugging is normal, click this button, the software will set the acquisition frequency and save time interval for daily data collection and preservation.

【Stop collection】 Click to stop collecting and saving data.

"Show debugging operation box" in the acquisition parameter settings are serial port number, baud rate, storage time interval and timing acquisition time.

【Serial number】 here with the actual access serial port number, if the desktop, usually COM1 or COM2, or USB converter mapped into a serial port, the general COM3-16, can access the computer hardware information in the query .

【Baud rate】 here generally do not have to modify, commonly used value of 9600.

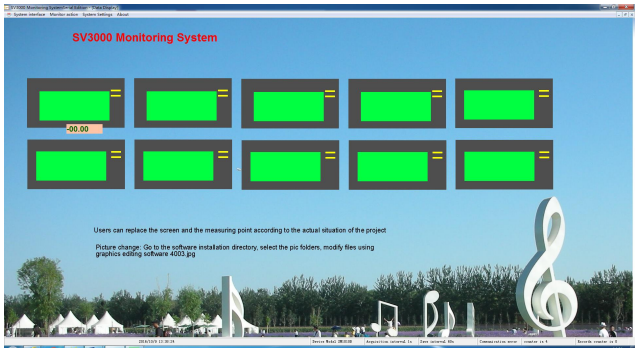
【Storage Interval】 This parameter generally refers to the time interval for saving data. The value range is 1-65535 seconds.

【Timing interval】 This parameter generally refers to the sampling period, the value of 1-60 seconds, can also be understood as the software running heartbeat interval.

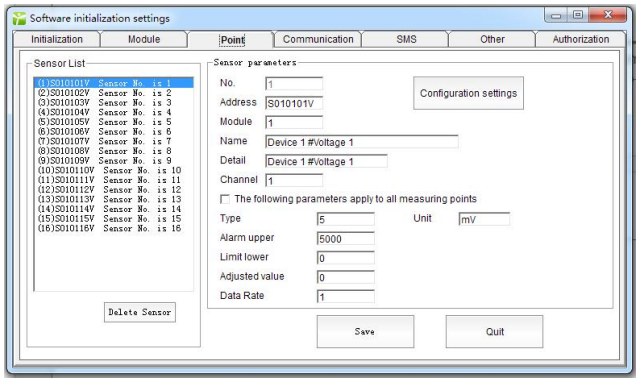
After the above parameters are set, click Save, the system will run directly according to the set parameters, without restarting.

3.5 Run the screen

This function is convenient for users to quickly build a beautiful and intuitive user interface. Users can replace the beautiful and intuitive industrial pictures.

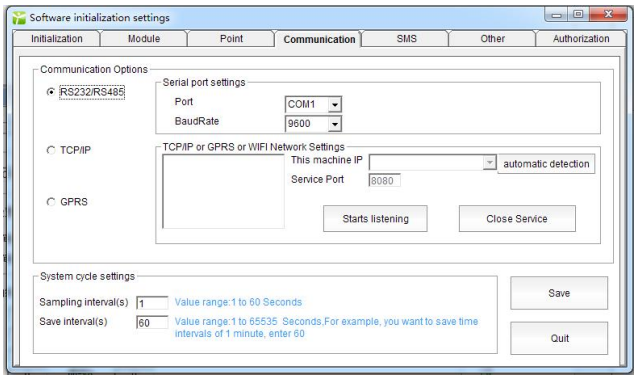


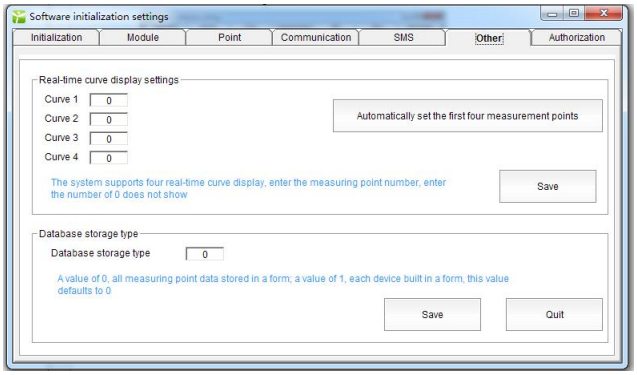
The measured data can be arranged according to the actual situation. The layout of the way shown in Figure 【Software Settings】 - 【Point】 - 【Configuration settings】



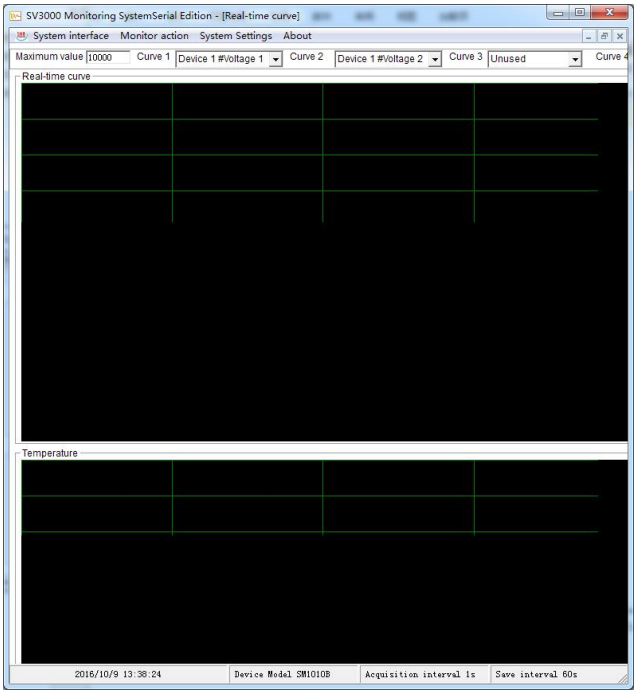
3.6 Real-time curve

The user needs to dynamically observe the data in a dynamic way to show the curve, the software supports 8 points dynamic real-time curve display. Select the measurement point settings: Interface 【software settings】- column 【communication】.





As shown in the figure, real-time display curve to set the right side of the form need to fill in the measuring point number, such as 1,2, ..., 200 and so on. If not set, so that the value can be 0.



Real-time curve interface

3.7 Historical curve

Click 【Historical Curve】 to enter the interface, as shown in the figure.

The History Curve dialog box consists of measuring point selection and curve analysis.

【Curve selection and settings】 Because the system has many measuring points, it is impossible to analyze all the data in the same window. If necessary, we can choose the point of interest for curve analysis, the system can open at the same time at most five curves were analyzed. The left of the selection list is the data table stored monthly, and the right is the list of all measurement points. The user can choose not more than five measuring points of the measuring points. After selecting, click 【Show Curve】 to display the current curve.

【Open Case】 When clicked, the curve window will become the following interface. Users can query current measurement value and measurement point number, address and position in real time with the time line.

【Open grid】 You can turn on or off the history curve grid. 【Open grid】 Click, the curve background will be aligned with the vertical axis of the network line, easy to analyze curve data.

【Curve analysis】 Curve analysis includes 【Curve Extension】, 【Y-axis】, 【Step Set】 【Curve translation】 The system stores data as a curve table by month. As the object of curve analysis.

【Step Set】 When analyzing the curve, you can click the button to shift the curve to the left or right. This setting is mainly to set the amplitude of the click once.

【Time】, 【Time Line】, 【Fixed Time】 The system stores the data as a curve table by month. After entering the dialog box, you should first select the historical time period. [Press Time], [Press Time Line], [Press Fixed Time] to select the time period. Time expansion, mainly by the user to enter the time range, according to the timeline expansion, mainly by the user with the time measurement line in the graph to select the time range. Expanded by a fixed time as a shortcut, click directly after the analysis of the nominal time range of the curve.

When segment selection is not made, the system will open the data record of the current month by default, if the average temperature point is recorded every hour. Where the abscissa of the graph is the time value (by date) and the ordinate is the temperature value. Use the mouse to move the timeline to the graph and display the current value of the curve when you open the legend.

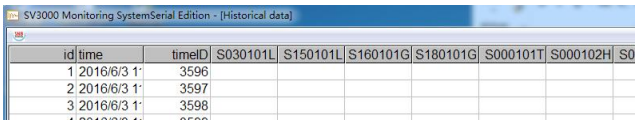
3.8 Data report

The data of all measuring points in the system are stored monthly. Query reports are also generated on a monthly basis.

As shown in Figure, the right-hand list shows all measuring points. When not selected, all measuring points are automatically displayed. When the measurement data is large, the user needs to be patient and so on.

Report as shown in Figure, records include ID, time, measuring point address and other items. Each measuring point has a unique measuring point address.

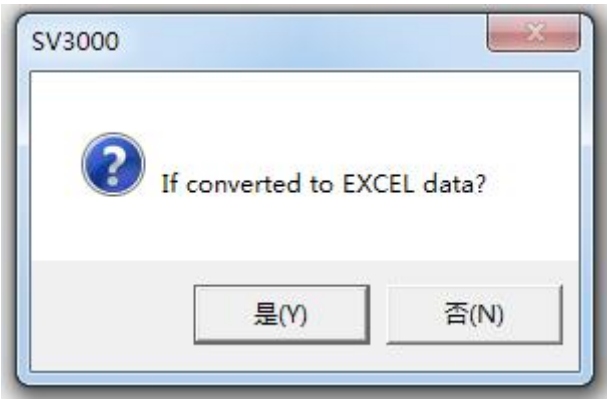
Each point data generally includes 2 decimal points.



3.9 Export the EXCEL file

If the data does not pop-up EXCEL interface after export, please check whether the computer is installed OFFICE2003.

After the data report form, click 【EXCEL Report】 to pop up the following interface:



EXCEL forms the data content and the conversion of the data exactly the same. Exported EXCEL file data record is very clear and easy to understand. At this point the user can use a powerful EXCEL software for a variety of charts.

3.10 Export TXT

Click the 

Export button, will pop up Notepad file selection interface.

Select a good record to store the file location and name, such as sss.txt, the software for the current data to record:

The first record information, ID, TIME and each measuring point number, followed by the storage of all measuring points by the data. Record this format file can also be exported to EXCEL file at any time. Before export, with the bulk replacement function, remove all quotation marks, replace, the above documents were:

Open the computer's EXCEL, select the open on the TXT file,

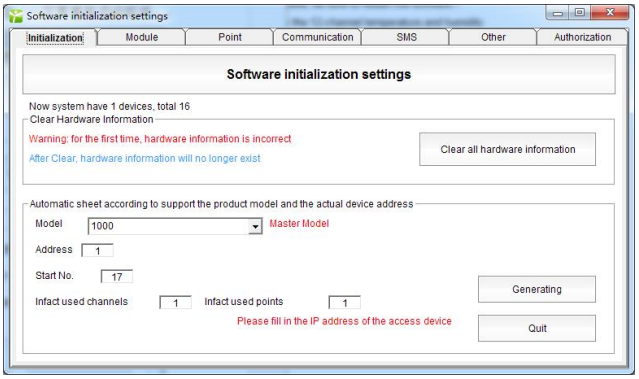
Communication settings

In the settings section, the software provides the [system initialization], [module settings], [measurement point settings], [communication settings], [other settings and other functions]. In the measurement point settings, also includes the [configuration settings].

4.1 System initialization

System initialization for the first time the user to use the software and software hardware configuration. It is recommended to suspend data collection and logging before initializing, or to complete the configuration and save it in less than 1 minute. After the configuration is complete, be sure to restart the software.

For example, you buy the 12-channel temperature and humidity SM1210B-12 module, the system software has not been set up when the hardware. You only need to enter the address of the device into the device address, then click "Generate device and measuring point information" button, it will complete the process of adding the device. Similarly, you can add other models. Note that the configuration is complete, be sure to restart the software.



Note:

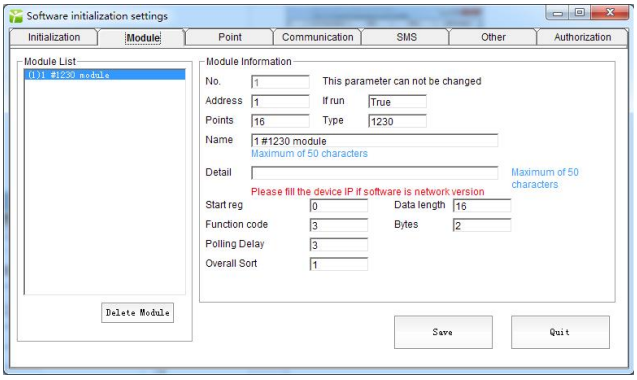
1. If data collection has been done before, you need to delete or rename the "data.mdb" database file in the directory "\ data" after installation. The system rebuilds the file after running the software.

2. The system currently supports only the list of product models, follow-up product model, I will continue to add Secretary.

3. If the configuration is incorrect, you can clear all the hardware and re-add the device hardware information

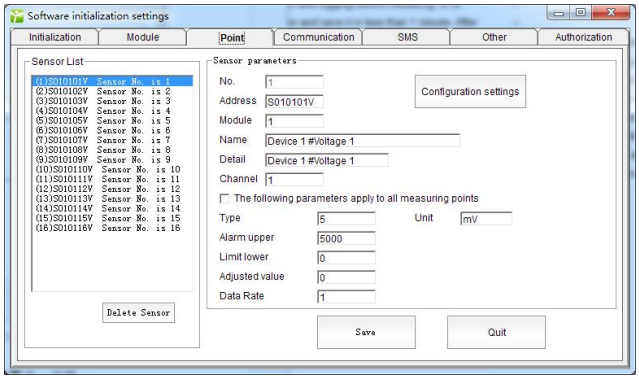
4.2 Module Settings

After the user adds the system hardware, if you need the parameters such as module name, description, round-trip time, etc., you can modify it in the module settings.

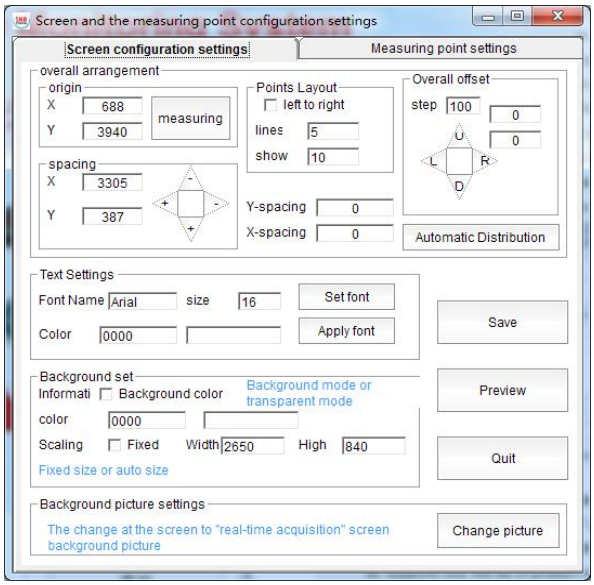


4.3 Measurement point settings

All the measuring points in the system are generated by the system initialization. When generating, the parameters such as measuring point description, name and upper and lower alarm limits are automatically generated. If you need to modify this information, you can modify this column. To modify parameters such as upper and lower alarm limits for all measuring points, tick "Apply the following parameters to all measuring points".

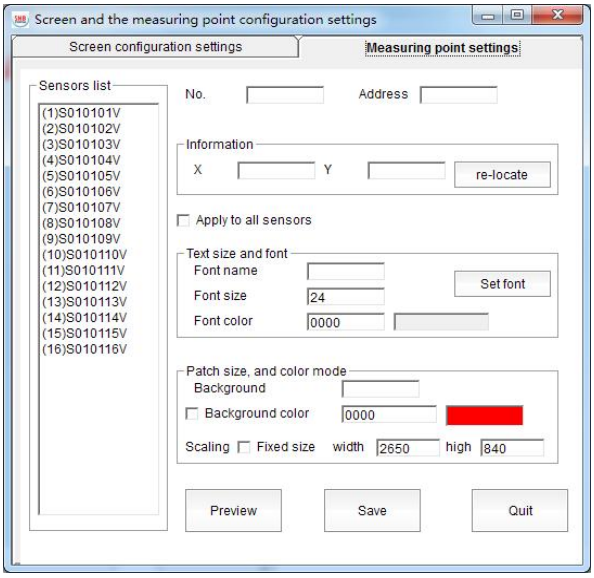


To further set the coordinate information of the measuring point in the configuration screen, we provide the configuration setting function.



Click "Configuration" to pop up the setup interface shown in Figure 4.3.2 and open the configuration screen. The configuration settings include screen configuration settings, measuring point configuration of the two basic functions. Screen configuration, the user can arbitrarily choose their own picture as the background screen, just click "change screen" button. Automatic positioning is used to locate all measuring points in a matrix. Positioning can be directly on the screen to see the results. You can also use the Reduce or Increase buttons to adjust the left and right margins. You can also adjust the position of the measuring point by up, down, left and right.

For measuring point display text size, background, foreground color, etc. can be adjusted. The example effect of the adjustment is shown in Figure. The method is shown in. After adjustment, you can preview the effect, not satisfied with the reset.

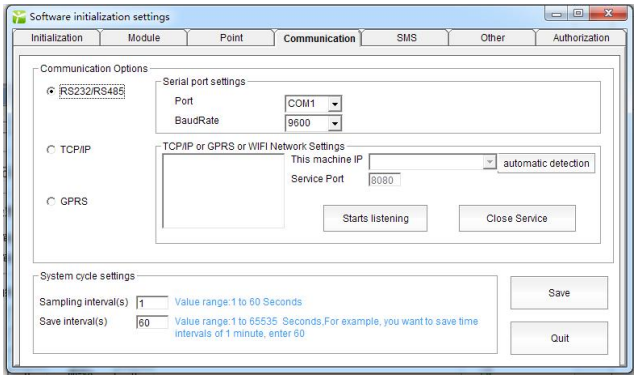


Move the measuring point method:

1. Select the measuring point
2. Click "Reposition"
3. On the configuration screen, double-click the same measuring point and move the measuring point
4. Lower the measuring point and save.

4.4 Communication Settings

Communication settings and cycle settings these two items in the "List Display" section has been mentioned.



【Baud rate】 here generally do not have to modify, commonly used value of 9600.

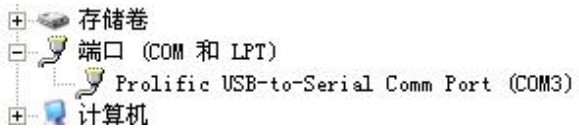
【Storage Interval】 This parameter generally refers to the time interval for saving data. The value range is 1-65535 seconds.

【Sampling interval】This parameter generally refers to the sampling period, the value of 1-60 seconds, can also be understood as the heartbeat of software running interval.

【Serial number】 In the "serial number" column, there are serial port settings, the default port COM1, many computers do not have serial port USB / RS232 converter, often change the serial number.

General USB / RS232 need to install the driver. The conversion cable into the computer USB interface, whether the normal installation can be done as follows:

My computer (right) ---- Management - Device Manager. See USB / RS232 conversion is correctly identified, from Figure 2.2.2 can be seen using the current port number COM3. After ensuring that there is no "!" After the identification, it indicates that the port Com3 is currently available.

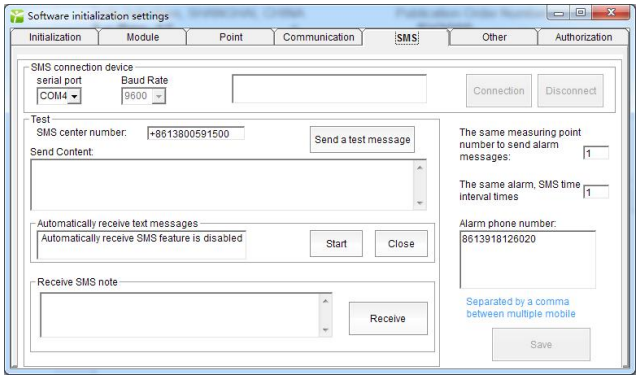


In the software "communication settings" - "serial settings", select the actual use of the port, as in the above example COM3, and then save.

As shown in Figure 4.3.4, the real-time display curve is set to the right of the form need to fill in the test point number, such as 1, 2... 200 and so on. If not set, so that the value can be 0

4.5 SMS settings (optional SMS module)

When the user connects the SMS alarm module, you can use the software settings - SMS settings, to configure the alarm on duty phone.



As shown above, the general SMS center number does not need to modify, users only need to fill in the "alarm mobile phone number" column to receive the SMS alarm phone number. The same number of SMS sent SMS, the general write 2 more appropriate, if the number is too large, will cause the accumulation of SMS on duty. "The same warning, the number of SMS interval" that is 2 times the interval between sending text messages, in seconds, the general default is 20 seconds. In this way, the same alarm situation occurs, the system will send two messages to the police, the two time interval of 20 seconds.

About software