

KingScada3.1 Specification

I、Summarize

1. **Structure:** KingSCADA is a versatile industrial monitoring and control software, uses C/S architecture, supports distributed real-time data services、 historical data services、 alarm、 events service and IO collection services. It mainly consists of IO Server, development system, run system, historical storage, alarm systems and other application modules. It can support graphical user interface, fully integrated, object-oriented development approaches.
2. **Functions:** Provides IO Server for data collection, man-machine interface drawing, trends, alarm and events overview charts, historical data records, reports, WEB reading and other functions. Supports script development language, multi-client operation, custom events, with graphical model and data model features. Supports more than 4000 kinds drivers, can develop multi projects at the same time, and support resource sharing between the projects (copy pic, tag, etc.).
3. **Historical storage:** Can save historical data up to 8000 days; Storage efficiency: 30000 records/second.
4. **License:** Using hardware keys, types: runtime key, full key (development + runtime); Tag number (just IO): 64, 128, 256, 500, 1000, 1500, 3000 and unlimited (60000).
5. **Language and system:** Can run on English, Japanese, Korean, Simplified Chinese, Traditional Chinese version OS, and can use Chinese and other languages and symbols, has full development and runtime environment in Chinese; supported windows OS: Windows XP sp3, Windows Vista (professional, Ultimate), windows 7 (professional, Ultimate), window 2003 server sp2 (R2), window 2008server etc.;
6. **Test:** Completely tested monitoring system, can ensure the implementation of the system performance.
7. **Redundancy:** Supports dual-link redundancy, dual devices redundancy, hot standby, has dedicated redundancy detection channel, switching time: less than one second.
8. **Data type:** Discrete, integer, float, string, structure variables and data models.

9. **External interface:** Has good openness, offer multiple channels to integrate with third-party software, supports ActiveX, OPC, DDE, OLE, ODBC, API and other interactive features and interfaces, can communicate with common DB, such as SWLSERVER, Oracle, and support efficient industrial-grade DB, KingHistorian.
10. **Web:** Provides web publishing based on IIS, integrates web with software system, can monitoring real-time information on IE browser via INTERNET/INTRANET.

II、Graphics

1. Provides 15 kinds of basic pixels, 11 kinds of extension pixels and 12 kinds of windows UI controls; Single project can contain 3000 pictures, one picture can support 20000 pixels; support drag and drop drawing.
2. Screen switching speed: less than one second, refresh rate can be set between 55 and 3000 millisecond.
3. Supports large screen, the screen resolution can reach 30000*30000.
4. Supports screen zoom, can magnify 1000 times or shrink to 10 percent without distortion.
5. Screen supports GDI+, can display various graphical objects using true color, support transparent color and filter color.
6. Has wealth wizards, with animation and logic control, provides powerful resource for project, and supports users to modify, edit, save the wizard, support user to develop wizard.
7. Supports bitmap, and the bitmap can be stored as engineering resources, supported image formats: jpg, bmp, png, gif, ico.
8. Can modify graphic online at run state.
9. Provide graphical model, with animation and logic script we can make the graphical object which has achieved through fast configuration via graphical mode, ; change of the model properties can be spread to all the model objects.

III、Report

1. Row: the minimum of row is 1, the maximum is 1000 in development environment, and 20000 row in run environment.
2. Column: the minimum of column is 1, and the maximum is 128.

3. Report is a universal form, can load data from SQL and other Database.
4. Supports csv format file import to report, and support csv and xls format file export out, and can be printed.
5. Report formats can be set, and supports online modification; can achieve variety operations, data conversion, statistical analysis, and can generate daily, monthly, annual historical report, and so on. Also can achieve real-time data report.

IV、Trend curve

1. Supports online switching between real-time trend curve and historical curve . When the program is running, real-time trend curves can automatically scroll change over time in order to response to changes in variables; historical trend curve can show the historical data anytime via command language.
2. Can enlarge and reduce the time line, span range: 1 second to 2 years.
3. Trend curve time unit achieve millisecond precision.
4. Supports more vertical axis and more curves, every trend curve supports four drawing area, each drawing area can show four vertical axis and sixteen curves, and can set different vertical axis for different curves, the maximum of curve is 64.
5. Can contrast and analysis multi-curves at the same time; can contrast and analysis single or multi curves at different time.
6. Provide nonius, and you can add notes, display appropriate annotation content based on different time intervals.
7. We can customize different curve, it supports curve display settings.
8. Can save and print report.

V、Alarm and Event

1. Alarm type: discrete variables alarm and analog variables alarm; and limit alarm, deviation alarm and rate of change alarm belong to analog alarm. You can define alarm delay and dead band for limit and deviation alarm. Alarm computing speed can reach to 5000 records/s.
2. Can set alarm groups, the alarms can be attributed to different alarm groups. Alarm group can be established layeredly, and set three alarm levels. The system provides alarm priority, 1-999.

3. Event types: operation event, modify the value or domain of variables; logon event, user log on system or quit system; station event, the startup and exit of KingSCADA system from stand-alone or network sites.
4. Alarm and event records can storage in SQL, Oracle, or Access DB, also can support KingHistorian DB provided by Wellintech.
5. Alarm and event output types: real-time, historical and query these three window output, real-time printing, audible alarm, email notification, phone call, etc.

VI、 System security management

1. Provides a security management system based on users, to ensure safe and reliable operation of the system. KingSCADA supports dual protection strategies, grading and partitions. Each operational element in application system can be specified protection level (maximum 999) and safety zone (up to 64). In the running state, if the priority of the users is less than the access priority of operational elements, or security zone of users is not in the range of operational elements, then the elements can't be operated.
2. Provides encryption function for project, to protect the safety of the project.

VII、 Help

Has complete on-line help of the software, and can directly query and read on each operation station.