智能吊挂

Intelligent hanger system

INTELLIGENT HANGER SYSTEM
智能吊挂系统

▶ 圣瑞思智能吊挂是一套智能化、数字化的服装生产流水线系统。它采用电脑化管理，配合企业级数据库、管理软件、电子技术、RFID射频技术、工业自控技术及先进的机械传动技术。

系统采用单件流水，可显著提高企业的生产效率、产品质量及生产管理水平，降低工人成本与管理成本，使企业盈利能力不断提升。

系统版权
圣瑞思拥有完全自主的软件著作权和单片机版权。对核心技术完全掌控，使得我们的产品更加适合客户的需求，并能提供周到的服务，客户的产品维护和更新也能得到及时保障。

系统语言
圣瑞思智能化控制软件，多语言设计，界面直观，操作简便，上手更快不易出错。以简体中文为默认语言，贴合中国人的使用习惯。

数据管理
圣瑞思强大的数据报表功能，有利于您的管理更加得心应手。 方便简洁的查询功能，以便于您对整个生产流程进行完全掌控。

射频与通讯技术
系统采用RFID射频识别技术，信息识别、读取即快又准。采用工业级CAN总线，直接通讯距离可大10m，通讯速率达 1Mbps，便于企业信息化管理的推进与实施。

▶ The Intelligent garment hanging system is a set of intelligent, digital garment production assembly line with computerized management, combined with an enterprise class database, management software, electronictechnology, RFID technology, industrial automation control technology and advanced mechanical transmissiontechnology.
SUNRISE system adopts a one–piece flow system, which significantly improves production efficiency, productquality and production management levels, reduces the production cost and management cost, which all makesthe enterprise profitability continue to improve.

THE COPYRIGHT OF THE SYSTEM
SUNRISE have complete independent copyright of software and single – chip microcomputer. Because we totally control core technology, it makes our products more suitable for the needs of customers, and also provides the best service to make the maintenance and updating in time.

SYSTEM LANGUAGE
There is a intelligent control software , multi language design, intuitive interface, and easy operation, while faster and less error prone. Simplified Chinese as the default language is more fit to Chinese usage.
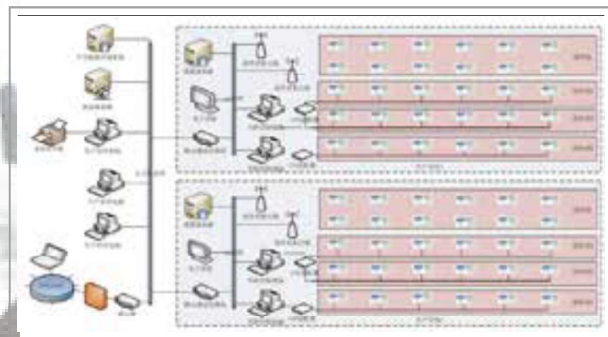
DATA MANAGEMENT
The powerful data report is beneficial to your management .The simple query function makes it easy to handle complete control of the whole production process

RADIO FREQUENCY AND COMMUNICATION TECHNOLOGY
It is the first use of RFID radio frequency identification technology and the information recognition is quick and accurate. It uses industrial grade CAN bus that gives direct communication of more than 10m. The baud rate is up to 1Mbps and it is convenient to facilitate information management of the enterprise.

系统网络拓扑结构图
NETWORK STRUCTURE DIAGRAM

SUNRISE S–50
The Standard Type Of The Intelligent Garment Hanging System

S50型智能吊挂系统

Human-commuter Operation Interface 人机化操作面板

Air Pressure Monitor Device 气压监控装置

Air Source Outlet for Every Station 每站配备独立压缩空气接口

▶ S50型，简约的结构设计，能安装在绝大多数客户工厂，维护、保养操作相对简单；齐全的软件功能，良好的操作界面，简单的操作方式深受客户信赖。链条、轨道采用密封设计能确保器械运行环境安全与清洁，营造安全、高效、整洁的生产氛围。针对不同客户不同的生产环境生产要求，亦可对产品相进行定制化设计，做到更加人性化，更加符合客户实际需求。标准配置，适应性高，适用于大多数缝制产品。

The S50 type, with the simple structure and maintenance operation, can be installed in the majority of factories. The complete software functions, good interface, simple operating method are well trusted by customers. The chains, track sealed are designed to ensure the equipment running environment is safe and clean, and it create a safe, efficient, clean production environment. According to different customers' production needs and production environments. The standard configuration and the high adaptability is suitable for the majority of sewing products.

配备安全警报系统

便捷的操作按钮

适用款式（部分）

SUNRISE S–70
The Standard Type Of The Intelligent Garment Hanging System

S70型智能吊挂系统

▶ S70型，采用立地式与吊顶式双重设计，不但提高客户空间利用效率，同时也更加美观大气，大大增强客户车间的通透性。
S70的悬挂高度可自由调节，使得流水线生产的服装款式更为广泛，可充分挖掘流水线生产潜力，真正为客户提高效益服务。强大的软件功能使得客户能够实时有效监测生产情况，并进行生产分析，加强对生产线的管控。同时亦可根据客户实际情况进行定制化的生产与服务。

The S70 type, which is designed to standards and ceiling, is not only to improve customer space utilization efficiency, but also to create a better work environment, It also greatly enhances accessibility in the customers workshop.
The suspension height of the S70 can be adjusted freely, so that a wider range clothing styles can be manufactured on the production line and also it can free the full potential of the real production line, which will improve the efficiency of service for customers. The powerful software function allows customers to monitor production in real time, and analyze production and give increased control of the production line .At the same time it can be set up according to the actual production situation requirements.

完备的电器接口
Perfect Power Socket

配置LED节能照明
Energy-saving LED Light

激光扫描机构
Scanning Sensor

适用款式（部分）

SUNRISE S–80
The Standard Type Of The Intelligent Garment Hanging System

S80型智能吊挂系统

针对性专业化设计
加大化的机构设计
家纺衣架结构设计
无需取下裁片缝制
适用于家纺、布艺、童车等
Targeted and Special Design
Customized Structure Design
Special Textile Hanger Design
Sewing Without Taking Down
Availabe for Textile, Cloth Art and Baby Carrier

专用型家纺衣架结构设计
Special Customized Basket Design

▶ S80型，是专门为家纺客户打造的产品。经过研发团队专业化设计，产品结构与功能都有了定向的改进，完全能满足家纺床上用品企业的生产需求。针对家纺用户，产品体积较大，重量较重的特点对衣架进行专门设计，无需取下裁片缝制。按照客户的生产需求推出可定制产品，做到完全从客户角度出发，帮客户解决实际问题。

The Type S80 is designed for home textile products in particular. With the professional design by R&D group, it is improved to the new structure and function, which is fully able to meet the needs of enterprises home textile bedding. As for home users, it is designed specially for larger product volume and sewing without removing the cutting pieces. According to the customer's production needs, The special customized product is completely designed to meet customers' requirements, and to help customers to solve practical problems.

▼ 专用型吊兰结构设计

适用款式（部分）

SUNRISE S–100
The Standard Type Of The Intelligent Garment Hanging System

S100型智能吊挂系统

系统标配8/10寸平板系统，安卓操作系统
具备扫读RFID、一二维码（选配）
视屏等多媒体功能

Equipped with 8/10 inch Computer Panel, applied in Android OS, contain RFID identification, one or two dimensional code scanning, video playing and other multi-media functions

▶ S100系统是专门为家居等超大超重产品缝制需求而特殊设计的。

S100系统经过研发团队专业化设计，产品结构与功能都有了定向的改进，完全能满足家居、汽车座椅产品企业的生产需求。

S100系统采用全封闭的轨道设计，系统衣架在设备中运行稳定，精准定位，不脱落，安全可靠。

S100系统采用EtherCAT工业总线设计。通信效率高，传输信道稳定，扩展速度快，峰值带宽可支持100M。

S100系统按照客户的生产需求推出可定制产品，做到完全从客户角度出发，帮客户解决实际问题。

S100 system is designed to tailor the needs of the special large products such as Furnishings.

S100 system has been professionally designed for many years through R & D team, and its product structure and function have been improved by orientation. It can fully meet the needs of large-scale special sewing production such as home and car seats.

The S100 system adopts full closed track design, and the special clothes rack is stable, unshedding, safe and reliable during the operation of the system.

The S100 system is designed by Ethercat industrial bus. It has more efficient communication efficiency, more stable transmission channel, faster expansion way, and peak bandwidth can support 100M.

S100 system can be customized in accordance with the customer's production requirements, to complete the customer perspective, to help customers to solve practical problems.

SOFTWARE SYSTEM
吊挂应用软件系统

PROCESS BALANCE INFORMATION
▶ 软件实时显示-工序平衡信息

Color separation,
more powerful visual management
颜色区分，更强的目视化管理

系统软件具备生产现场实时显示功能，实时显示工序平衡信息，易于监控实时的生产线平衡。

The software of the System has the function of production real–time display, process balance information in real time, and it is easy to monitor the balance of the real–time production line

YIELD BALANCE INFORMATION
▶ 工序产量平衡信息

The software of System has the function of production real–time display, which shows balance information in real time, and is easy to monitor the balance of production schedule in the real–time.

系统软件具备生产现场实时显示功能，实时显示工序产量平衡信息，易于监控实时的生产进度。

The cumulative,
on the same day,
the target.
累计，当日，目标

COMMUNICATION MONITORING WINDOW
▶ 通讯监视窗口

Monitors each site hanger and communication status in real time
实时监视每个站点衣架进出站及通讯状况

Monitor the equipment operation, prevents production loss due to device problems. Do the maintenance the equipment according to the device daily operation log.

实时监视设备运行情况，预防因设备坏点造成的生产效益损失。可根据每天形成的设备运行日志对设备进行有效的维护保养。

www.sunrise.com.cn

HANGER PATH
▶ 软件实时显示-衣架路径

Basic information
of the processing of hanger
在加工衣架的基本信息

The path information
of the rack processing
衣架加工的路径信息

Human
intervention to repair
人为干预修复

The Real time recording of the hanger running path ensure the reliability of data.Damaged hangers caused by accidents in process can be replaced quickly in the process of the real time control system, so it does not affect production data; It can detect any inconsistencies between in information. caused by human factors.

实时记录衣架运行路径，保证数据的可靠性。对因意外情况损坏的在加工产品衣架可实时通过系统更换新衣架，不影响生产数据；对人为因素导致的衣架信息与实物不符的衣架进行人为干预修复。

MULTI ROUTE RUNNING SIMULTANEOUSLY
多路线同时运行 ◀

The system can control the process of multiple styles simultaneously, and it only need to be switched from one style to another styles at in-line station.
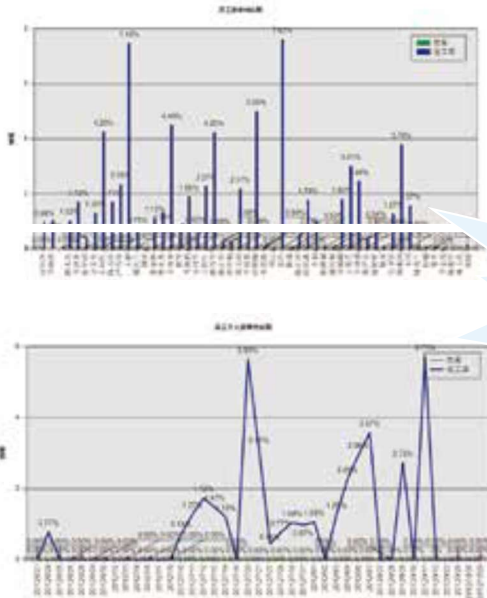
系统可满足同时加工多个款式，只需要在挂片站切换款式即可。

Corresponds to the system settings, hanging Station real time display, red is the hangingline
系统对应设置区，挂片站实时显示，红色表示正在挂片的路线

Distinguish the different routes by alpha-numeric text.
可以以字母，数字，文字来区分不同路线

丰富的报表 RICH FORMS

It can analyse workshop production from different angles with more than 20 types of report.
20多种报表，
从多角度分析车间生产情况

The System has a great variety of report forms, and can be added to the new according to customer needs . For example: staff workload statements, group output statements, employee payroll report etc...

系统自带样式丰富的报表，也可根据客户需求二次开发报表。如员工工作量报表，组别产量报表，员工薪资报表等等。

SYSTEM CUSTOMIZATION SERVICES

吊挂系统定制服务

▶ **客户可根据不同型号选购所需的功能配置提供硬件、软件功能量身定制服务**

The workshop station system, there is the wireless control device and information collecting device, which can collect production data automatically and deliver into the CPU of system in the real time and make the integration on data analysis for achieve the dynamic management of workshop information.
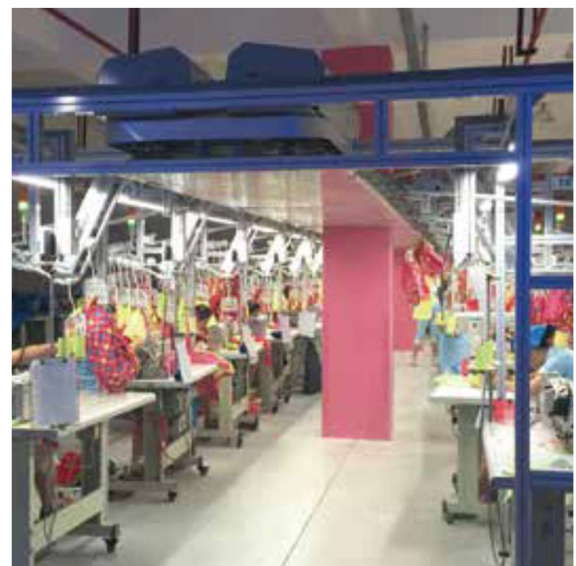

立柱设计
Column design

吊顶设计 Ceiling design

桥接设计
Bridge design

软件的二次开发
Software redevelopment

系统选购件
System optional hanger

包柱设计
Package column design

INVESTMENT RETURN

吊挂系统投资回报分析

$$1_{\text{Month}} + (\,5.508\sqrt{24.454}\,) = 5.43 \text{ Month}$$

The period of the investment return
投资回报周期

Investment Calculation 投资计算

The cost of the hanging system procurement：$240,020
SUNRISE 吊挂系统采购成本:24.022万元

The monthly output of the general line：$220,320
普通流水线月产值：22.032万元

Monthly output value of Assembly line：$270,540
吊挂流水线月产值:27.54万元

The monthly increase in production of the hanging pipeline：$55,080
吊挂流水线每月增加产值：5.508万元

The annual energy consumption of the system：$432
Electricity price is 1.2 yuan / degree 每年系统能耗:0.432元(电价按1.2元/度计算)

Invisible investment returns
▼ 隐形投资回报

Provide opportunities for enterprise reform
为企业提供了改革契机

Speeding up the internal management of enterprises
加快企业内部管理推进

A reasonable standard for the system of salary distribution
合理规范薪资分配制度

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Conditions / Project	The hanging production line, setting up the basic conditions 吊挂流水线，基本条件设定	The normal production line, setting up the basic conditions 普通流水线，基本条件设定
The procurement cost 采购成本	SUNRISE S50：$8,180/Standing S50标准型：8180元/站（29站位）	Equipment procurement for Conventional sewing：$240,220 常规缝制设备采购:24.022万元
The Working time 工作时间	Our Employees works 300 days a year -- 25 days working day every month 员工每年工作300天，每月大约25天净工作日	Our Employees works 300 days a year -- 27 days working day every month 员工每年工作300天，每月大约27天净工作日
The personnel allocation 人员配置	There is a total of 34 people, 26 of whom work on the production line, with 8 working outside the production line 线内组26人，线外组8人，合计34人	Ordinary POLO unlined upper garment of 34 people/group (28 people, line 6 people) 普通POLO衫34人/组（线内28人,线外6人）
Energy use 能效发挥	The learning/training period is one month. The actual average yield is the same as ordinary output which mean the monthly output is variable 磨合期一个月，实际平均产量跟普通流水一样，即月产量变	The general line output value is 220320 yuan, 55080 yuan month is the added value 普通流水线月产值22.032万元，月增加值5.508万元
Order price 订单价格	The average yield is 37.5 pieces which improve efficiency by 25%, based on the unchanged unit price, so the output value is 300 yuan 人均每天产量37.5件，能效提高25%单价不变，人均日产值300元	The average yield is 30 piece, The price of POLO shirt is 8 yuan, So the per capita output value is 240 yuan 人均每天产量30件，POLO衫每件接单价8元，人均日产值240元

The above conditions are based on the actual production of a customer's factory – based on the POLO as an example
以上条件设定中的数据均来至于客户工厂实际生产中的样本，以生产中档POLO衫为案例分析题材。

▶ 企业本身管理水平的高低对产能的提升不会产生决定性影响，只有持续的改善与坚定的执行才能最终将服装吊挂生产系统的最大潜能开发出来，最大限度的提升效能，减少缩短投资回报周期。

The management level of an enterprise does not have a decisive impact on productivity , only the continuous improvement and the strong implementation exploit the potential and enhance the efficiency maximum and also reduces the period of return on investment.