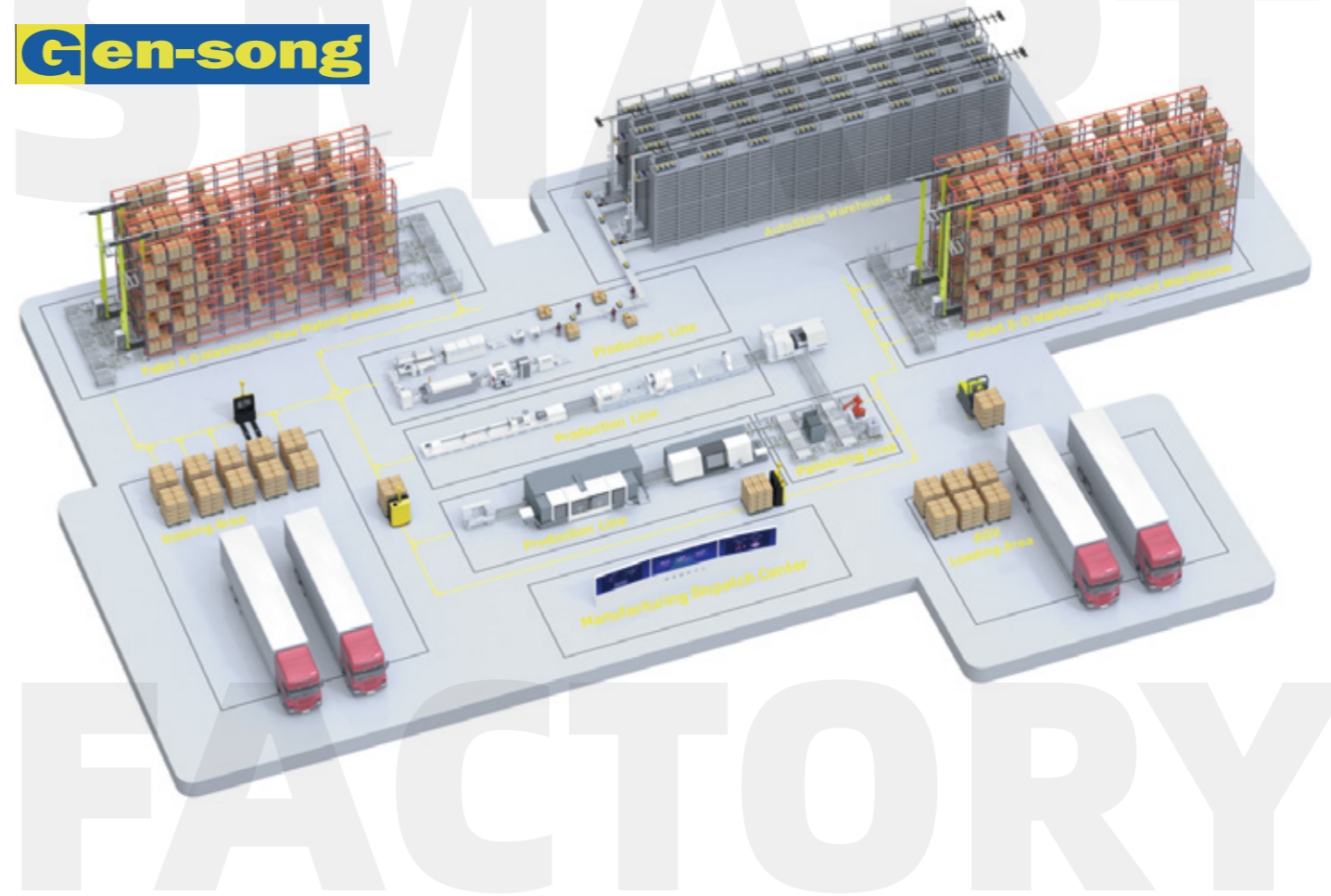


2023Q4



# GEN-SONG

Hefei Jingsong Intelligent Technology Co.,Ltd.

Stock Code 688251



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Comprehensive Service Provider of Intelligent Factory System Design and Construction



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HEFEI JINGSONG INTELLIGENT TECHNOLOGY CO.,LTD.

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# Company Profile



Hefei Jingsong Intelligent Technology Co.,Ltd. was officially established in 2007, now covers more than 60,000m<sup>2</sup>, awarded with "National High-Tech New & Special" & IPO Enterprise, who introduced and absorbed the international advanced logistics equipment manufacturing technology, developed smart logistics and intelligent manufacturing systems early in China mainland.

## 2004

Introduced the international advanced logistics technology, start the business in "OEM" produce some logistics equipments.

## 200+

More than 200 independent intellectual property rights, have been successfully implemented in many industry benchmark projects.

## 18+

More than 18 years of deep cultivation in the industry, focusing on comprehensive services such as intelligent logistics and intelligent manufacturing.

## 30%

The company has successively established R&D centers in Hefei, Shanghai, Hangzhou and other cities. R&D personnel occupy more than 30% of the total employees.

Gen-song Intelligent, as a comprehensive service provider of intelligent factory system design and construction, we focus on core businesses such as green intelligent logistics robots, intelligent factory system design and construction, twin system platform, and is committed to provide customers with expert-level customized software and hardware integrated solution consultation and planning design, software R&D and equipment manufacturing, project implementation and after-sales service, advanced technology integration and empowerment and other system integration and application comprehensive services.

Gen-song Intelligent is a comprehensive service provider of a variety of Automated Guided Vehicles (AGVs), Autonomous Mobile Robots (AMRs) as well as Intelligent Factory System design and construction, such as Automated Storage & Retrieval System (ASRS), Light or Heavy Stacker Crane, Pallet Shuttle System, Warehouse Management System (WMS) and Warehouse Control System (WCS), enabling our partners to have access to advanced logistics management systems that greatly increases intralogistics efficiency and reduce human costs and to realize Industry 4.0.

# Development Path

## 2004

Introduced the international advanced logistics technology, start the business in "OEM" produce some logistics equipments.

## 2007

Gen-song was officially established, run its own brand, undertook the project of Automated 3-Dimensional Warehouse, and successfully implemented the project in the casting industry.

## 2012

Successfully transformed into a system integrator and landed the digital factory project in the metallurgy and foundry industries. The first laser-guided AGV was successfully applied in the power industry.

## 2016

Absorb state-owned holding investment, become a "National Excellent Recommended Enterprise for Storage Equipment Technology Application", complete the Double Soft Certification, and comprehensively open the business layout of smart factories.

## 2021

The IPO of the science and technology innovation board has successfully passed the meeting, and it is the first in China to develop and manufacture 20-tons laser forklift AGV products, and release the industry's new intelligent vehicle solutions.



## 2008

Focus on the R&D and manufacturing of core logistics equipment, and take the lead in successfully launching aluminum-alloy single-column light-duty high-speed stacker products in China.

## 2009

Successfully passed the ISO9001 Quality Management System Certification. Successfully launched a variety of stackers and shuttle RGV products, became a core logistics equipment manufacturer in China.

## 2010

Awarded the title of "China Famous Brand", developed WMS and WCS software.

## 2011

Awarded the National High-tech Enterprise and the 3 prize of Anhui Sci.&Tech Progress. Launched a variety of new stackers, RGV products which have been successfully applied in many industries.

## 2013

Take the lead in developing visual navigation robots in China, and develop intelligent handling systems based on robot technology.

## 2014

Successfully developed a heavy-duty five-axis truss robot, which landed in multiple industrial automated three-dimensional warehouses and digital factory projects.

## 2015

Awarded the title of The National Industry Cluster, established strategic cooperation with Japan IHI, focusing on cold storage system integration and equipment manufacturing, and formed strategic cooperation with German KUKA, focusing on loading and unloading, intelligent handling.

## 2017

Awarded the title of "Excellent Brand of China's Logistics Equipment Industry". The more than 60,000m<sup>2</sup> new park was put into use, optimizing the strategic layout and focusing on the integration of intelligent logistics systems and comprehensive services of intelligent equipment manufacturing.

## 2018

Self-developed and self-produced vision robots have realized product application in the industrial field, established strategic cooperative relations with a number of The Fortune 500 Companies, and landed intelligent factory projects in many industries such as automobiles and chemicals.

## 2019

Complete the shareholding reform, launch laser SLAM navigation AMR products, establish software commercialization, hardware product matrix, control modularization and other standard systems, and establish Shanghai branch.

## 2020

Awarded the well-known trademark certification in China. Established Hangzhou Zhilingjie Robot Co., Ltd., launched the first 3D-climbing robot product in China, launched the IPO, and entered a new stage of Gen-song Intelligence.

## 2022

The company was successfully listed on the Sci.&Tech Innovation Board with the Stock Code SH688251. Released a new generation of green intelligent logistics robots.



# Qualification Honor



# Scientific research Strength

Gen-song Intelligent insist on investing more than 7% of sales revenue in R&D every year, and has long-term industry-university-research cooperation with universities such as USTC, HFUT, ZJU and etc. This cooperation has effectively promoted the coordinated development of multiple parties and accelerated the transformation of research and development results. The purpose of cooperation between enterprises, universities and scientific research institutions is collaborative development, mutual benefit and win-win results. Thus the innovation capabilities of enterprises have been continuously improved, and scientific and technological innovation and talent gathering have also been promoted to improve the global intelligent manufacturing.

At present, there are a total of 280 R&D personnel, including 4 doctors and 32 masters, mainly engaged in electromechanical design and control algorithm, providing strong technical support for the company's development. The team has formed an echelon-style development, and awarded the "Intelligent Warehouse Innovation Team" in 2017. Guided by market demand, the company always maintains forward-looking technology, and the number of new products developed by our R&D team continues to increase at a rate of 6 per year.



160+ Patents



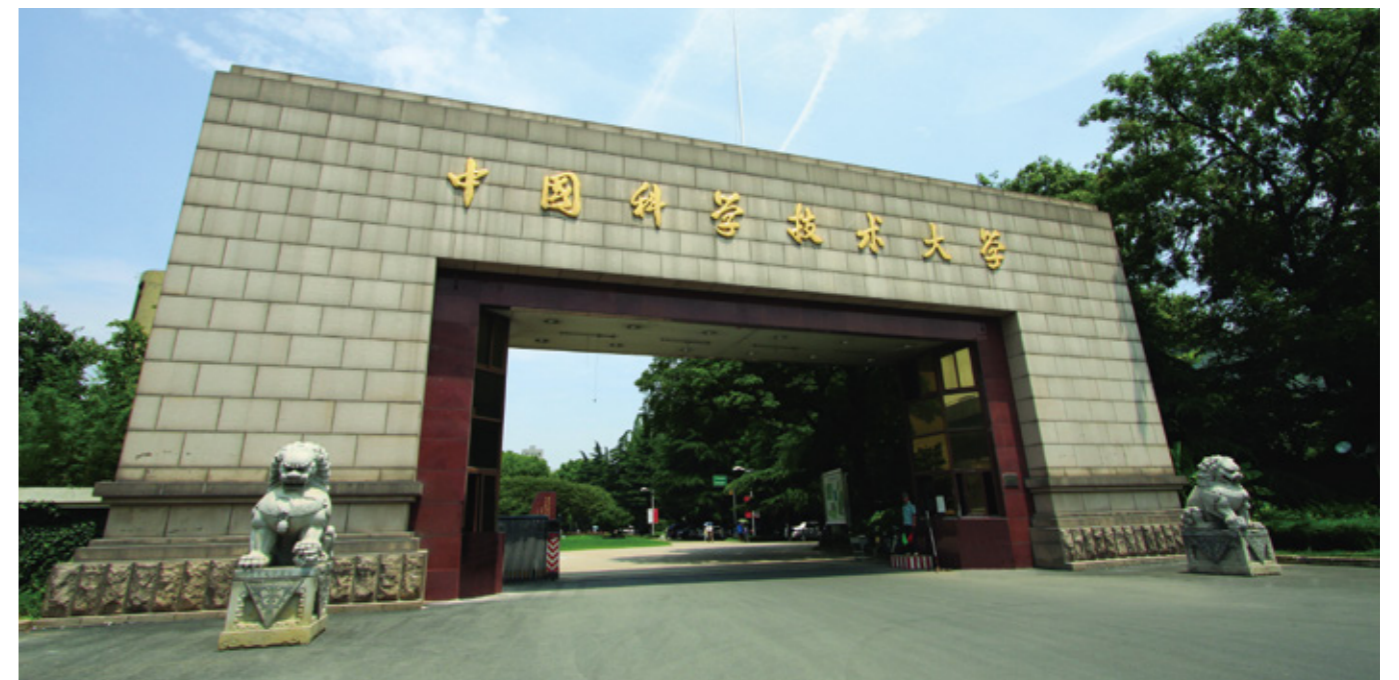
40+ Software Copyrights



30%+ R&D Personnel

Industry-university-research integration,  
assisting the transformation and application of logistics technology.

## Partner Institutions

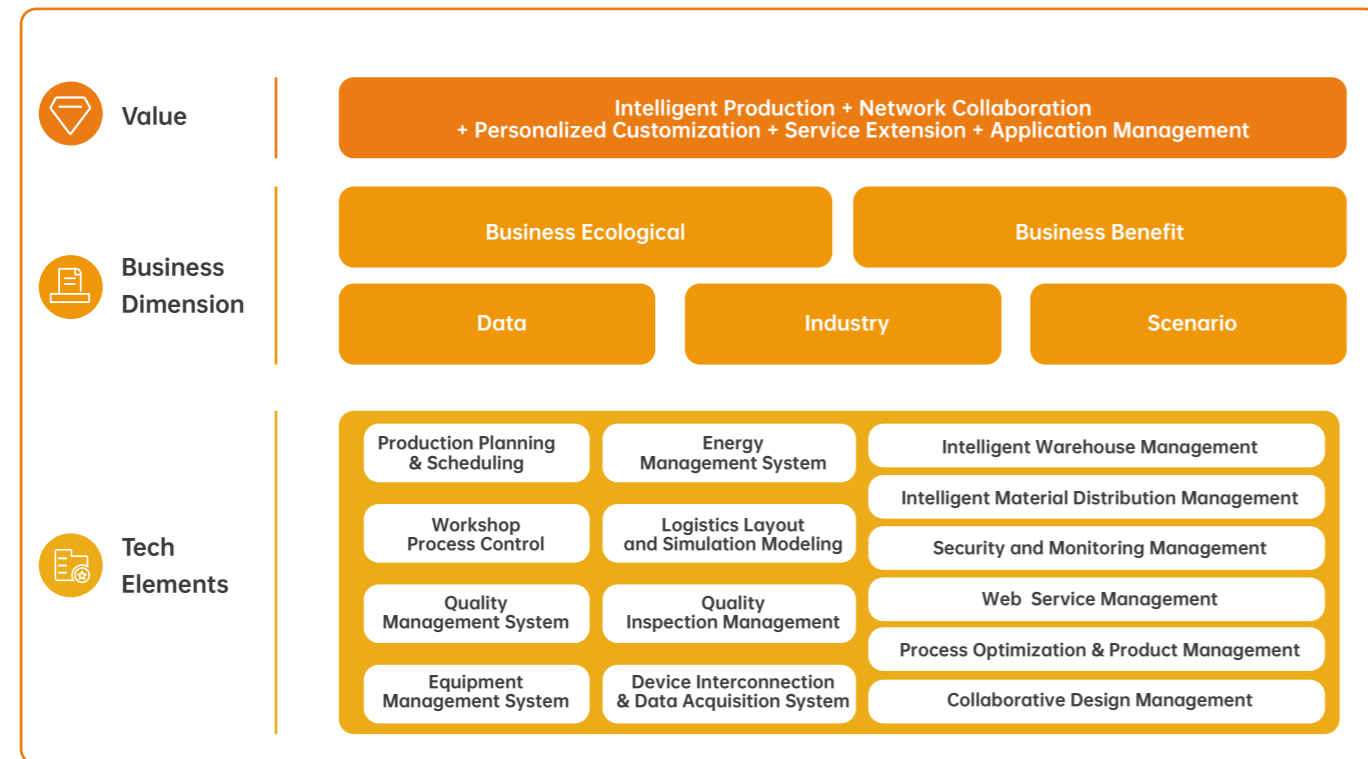


# Smart Factory Overall Solution

Based on the five models of "Intelligent Production + Network Collaboration + Personalized Customization + Service Extension + Application Management", combined with platform of business and technology, realize the integration of vertical and horizontal value chains. Integrate the "5G + AI +IIOT" and other advanced technologies, realize the integration of the whole process of "Storage, Picking, Distributing, Combining" of "Raw & Auxiliary Materials, Semi-finished Products, and Finished Products" and other materials, so that data among "Humans-Machines-Things" can be shared in real time and business highly coordinated. Provide an overall smart factory solution under the new definition mode of "Saving Cost, Increasing Efficiency, Reducing Consumption, Improving Quality, and Optimizing Management".

## Value of Smart Factory Solutions

- Realize the integration of R & D, technology, production, etc. and the good communication of enterprises, workshops, equipment, etc.
- Construct integrated management and control of process planning, factory planning, and production operations
- Realize the real-time monitoring of the operation of the whole plant, and visualization of production, equipment health and predictive management, and efficient collaborative operation of Humans-Machines-Things
- Realize the unmanned, efficient and visual operation mode of material storage, distribution, handling and other links
- Form a closed cycle of "Business & Technology", and then realize efficient and rapid production of enterprises, continuously reduce production and operating costs, and optimize and iterate product competitiveness



# Smart Warehousing Solutions

Based on the concept of "Digital Twin + Warehousing", according with the customer's "Needs, Bottlenecks, Pain Points". In order to better understand the roles of the systems, compare them to the human body. Envision the mechanization in the warehouse, including Stacker Crane, AGV/AMR, Shuttle RGV, Conveyors, Case Sorters, Tilt-tray Sorters and more as the skeleton. It is rigid and not easy to change once it is in place. The "WMS and WCS" acts as the brain of the facility, indicating what needs to be done and communicating those instructions to the body. Continuously optimize rule design schemes through digital twin modeling, and finally provide a set of intelligent warehousing solutions suitable for different industries, scenarios, and physical layouts.

## Value of Smart Warehousing Solutions

- Save floor space, improve space utilization, and increase storage quantity
- Reduce labor costs, can realize unmanned store in and out, put on and off shelves, inventory, etc.
- Realize intelligent storage management and improve inventory accuracy by realizing intelligent inventory visualization, monitoring management, inventory operations, etc.
- Improve the overall storage operation efficiency by realizing the linkage operations of Stacker Crane, AGV and other intelligent equipment, complete the loading and unloading of materials in and out of the warehouse
- Reduce Humans-Machines-Things cross-operation, eliminate potential safety hazards, realize foolproof and error-proof, and improve operation management and control capabilities

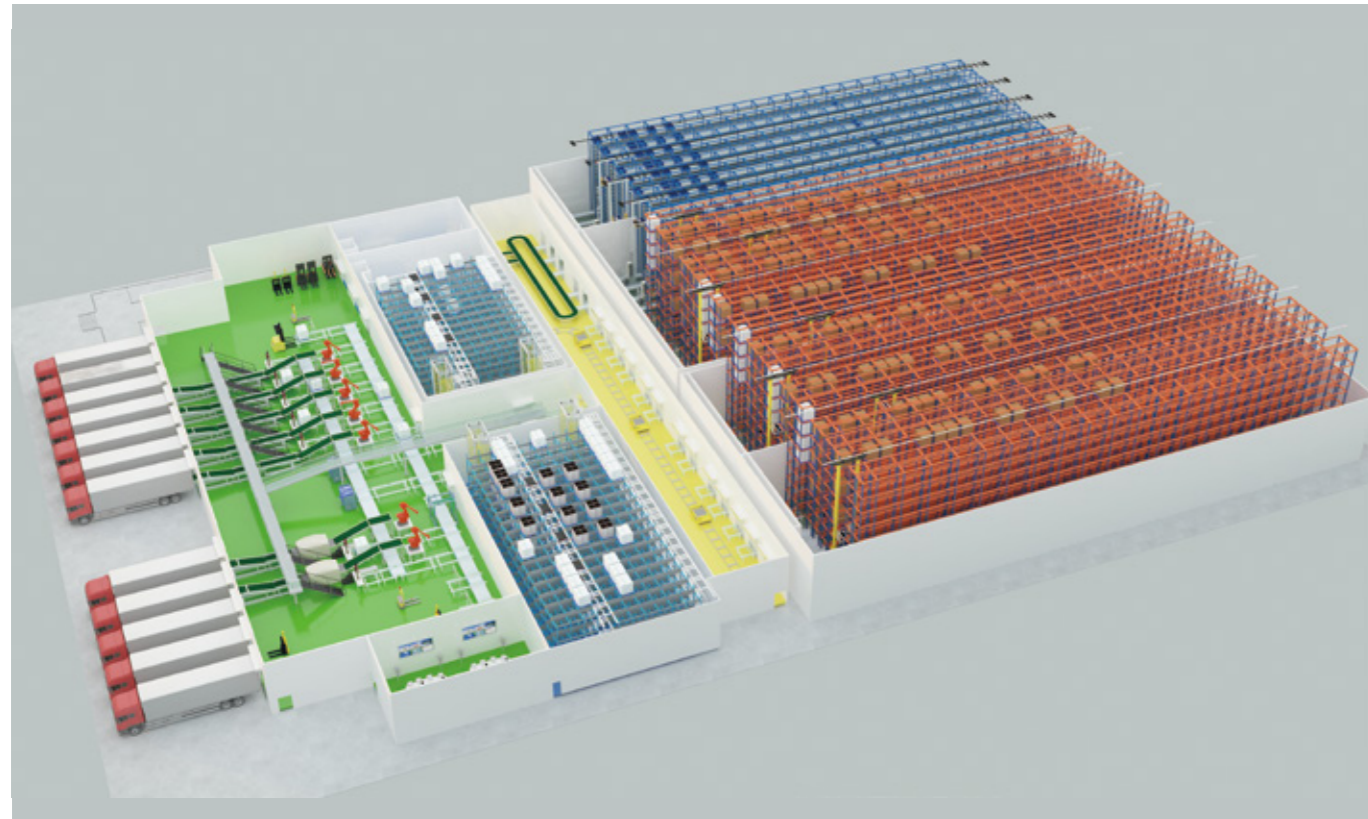


# Intelligent Warehousing and Distribution Integrated Solutions

Based on the design concept of "E2E + Warehousing + Delivery", focusing on the customer business demand, with the attributes such as "Material SKU, Wave Picking, Picking Strategy, and rules for loading and unloading" as limitation, by using "EIQ, PCB, ABC" and other analysis methods as scientific tools, digital twin modeling as the core of the system, hardware products such as "Stacker Cranes, AGV/AMR, Manipulators" as executive body, and software products such as "OMS, WMS, WCS" as the decision-making brain, provide customers with End-to-End intelligent warehousing and distribution integration solutions.

## Value of Intelligent Warehousing and Distribution Solutions

- The integrated operation of Storage-Picking-Distributing, reduce the interactive process, improves the overall operating efficiency of the system
- Reduce labor costs, eliminate potential safety hazards, realize foolproof and error-proof, and improve operation efficiency
- Reduce inventory levels, improve distribution efficiency, reduce inventory funds, make the information visualization and sharing
- Strengthen online management, systematize business processes, improve order fulfillment capabilities, improve satisfaction and brand image



# Intelligent Material Handling Solutions

Based on the "AMR+, EMS+" model, according to the customer's material category, handling process, human-machine interaction, working hours, labor intensity, labor costs and other key points, by using "AGV/AMR, shuttle EMS, hoist" and other hardware products as executive body, software products such as "GS-AIS intelligent dispatching system, WCS, and AGVs scheduling system" are used as decision-making brains, and planning concepts such as path planning, task sequencing, and station priority are used to provide customers with efficient and collaborative intelligent material handling solutions.

## Value of Intelligent Material Handling Solutions

- Reduce labor costs and labor intensity, eliminate manual handling, prevent fools and mistakes, and easy to manage
- Realize unmanned handling operations, meet all-time requirements, and eliminate cross-operation among humans-machines-things
- Improve the handling efficiency, optimize the handling process, simplify the docking method, systematically manage the whole process, and easier for information traceability and query tracking management





# Intelligent Equipment and Software Products

## Stacker Crane

The intelligent stacker crane is the core logistics equipment in the intelligent storage system. It is mainly used for the storage and retrieval of pallet-type/case-type unit materials. Depending on the size, weight, stacking height, single or double extension of the rack, working station, etc. of the material, different types of stacker crane, such as light, medium and heavy, single or double columns, straight or turning rails, can be designed to make sure the project's high efficiency running and cost-effective.

### Features of the Stacker Crane

- Using international advanced technology, continuous iterative optimization, to achieve product standardization and modularization
- Light weight, stable structure, fast speed, long service life and other characteristics
- Multi-level safety protection, complete product series, less maintenance frequency, good hardness and strength
- Multiple application scenarios usage, such as chemical industry, metallurgy, casting, automobile, machinery and heavy industry, and in different environments such as normal temperature and cold storage



## EMS

Electrical Monorail System here short for EMS, which is a kind of intelligent handling equipment that runs in the air. The EMS system consists of a sky rail, a trolley, a lifting device, a docking mechanism, a conveying mechanism, an electronic control system, and a dispatching system. It can realize fast, efficient and accurate handling, grabbing and picking and placing of goods in the air in different positions, different workshops and different factory areas.

### Features of EMS

- More efficient:** non-interference with ground equipment, flexible path layout for air operation, barrier-free handling, faster and more efficient operation
- Safer:** Real-time communication among EMS devices to achieve safe, reliable and stable operation under collision avoidance, program optimization control, and intelligent scheduling
- More accurate:** direct supply of various devices and stations in air operation, combined with intelligent dispatching system to prevent fools and mistakes, more punctual and accurate operation



## AGV/AMR

AGV/AMR are the core intelligent equipment for material handling and distribution. Multiple application scenarios usage requirements, forklift and traction type AGVs, latent type AMR, and use of laser SLAM navigation, QR code navigation, visual navigation, composite navigation, combined with the AGVs intelligent dispatching system, can well complete the operation of the overall project, and customization against customers' needs is available.

### Features of AGV/AMR

- Intelligent status perception:** Real-time perception of the surrounding operating environment. Real-time perception of changes in key factors such as distances and coordinates of "humans- machines-things"
- Real-time analysis and decision-making:** establish monitoring maps in real time, continuously analyze AGV position changes according to intelligent algorithms, and make real-time paths, compatible with different operating scenarios
- Accurate and efficient execution:** real-time correction of pick-and-place and walking paths and positioning coordinates, optimizing the speed of walking and terminal pick-and-place goods, and realizing high-precision positioning of products for efficient operation
- Flexible and visual deployment:** The product has self-learning and optimization capabilities without excessive manual intervention, enabling rapid customized deployment
- Intelligent safety control:** 360° full coverage of safety detection and obstacle avoidance, height detection of low objects, installation of mechanical anti-collision

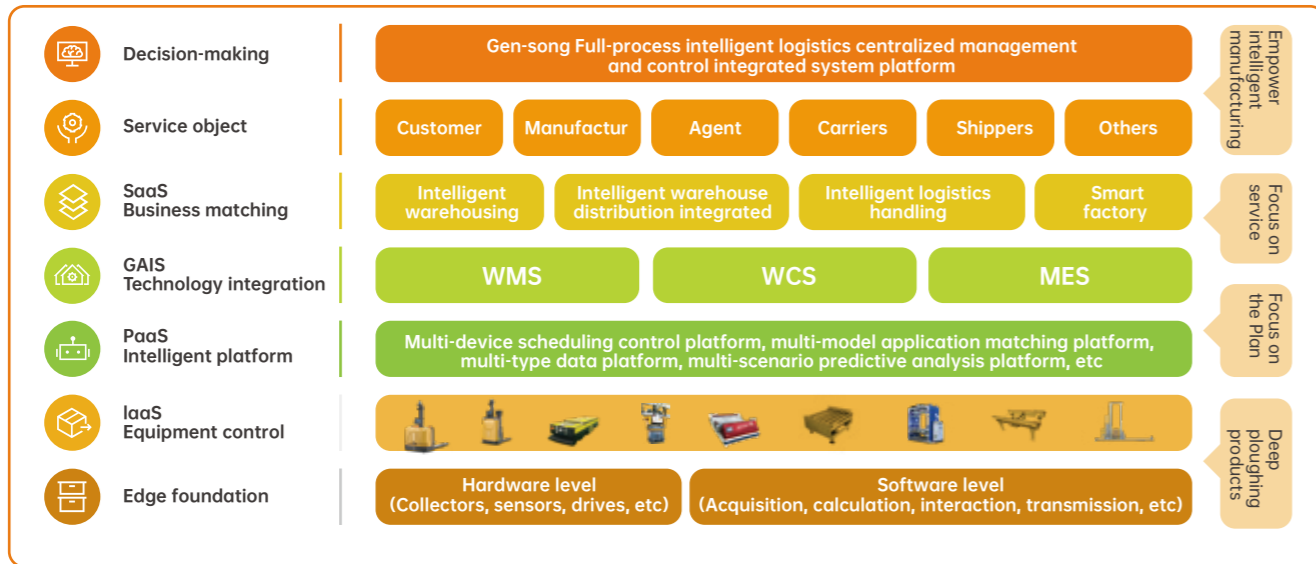


## Customized Equipment

Gen-song Intelligent adopts international advanced logistics equipment technology and conducts industry-university-research technology docking in universities such as USTC, HFUT, ZJU, etc. After years of development, it has completely independent R&D and manufacturing capabilities for special-purpose equipment. Through demand survey, R&D design, simulation testing, manufacturing and other key links to match the project goals of customers in different industries.



## Management And Control Integrated System Platform



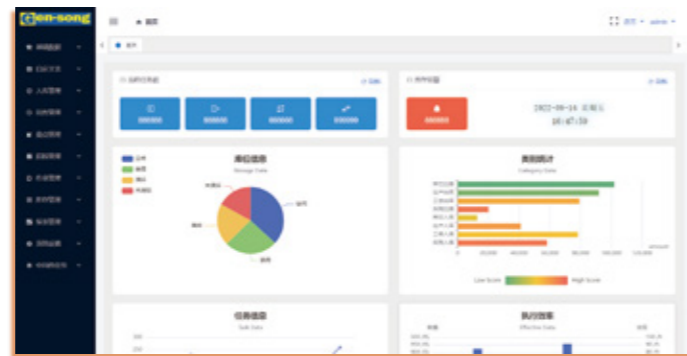
Gen-song intelligent management and control integrated system platform is the decision-making brain of intelligent logistics and intelligent manufacturing system integration, through the vertical edge layer, control layer, platform layer, integration layer, business layer and other horizontal hardware equipment, business needs, task functions, etc. coordinate matching and integration application, to achieve intelligent integration&control&visibility.

## WMS

WMS warehouse management system mainly helps customers improve inventory management efficiency through management functions such as inbound, in warehouse, outbound, inventory and rule strategy, and achieves the goals of reducing costs and increasing efficiency.

### System highlights

- Support multi-industry, multi-warehouse, multi-shipper, multi-platform and other different business models
- Supports multiple custom configurations such as attributes, documents, SKU types, and rule policies
- Support dynamic and custom counting, order and planned replenishment, Diversified services such as cross-docking and transfer
- Support inventory health management functions such as inventory monitoring, inventory diagnosis, inventory visualization, and inventory optimization



WMS App interface

## WCS

WCS warehouse control system mainly realizes task feedback and execution with WMS through task management, equipment scheduling, optimization sequencing, equipment monitoring, fault warning and other functions.

### System highlights

- Through operation research optimization, distributed system logic, task prioritization, and intelligent scheduling control are realized
- Support equipment tasks, job processes, device paths, Real-time monitoring and visual management of operation faults
- With flexible policies, simple configuration, accurate execution, more robust and stable diversified functions such as data visualization



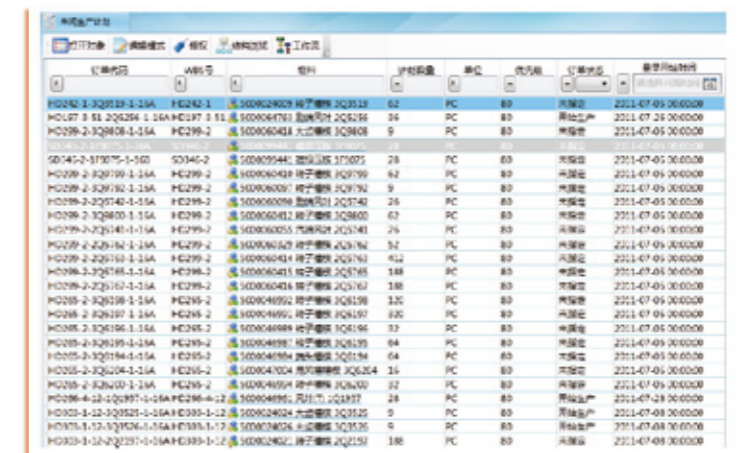
WCS APP Interface

## MES

MES workshop manufacturing execution system mainly improves the adaptability and agility of production operations through closed-loop processes such as planning and scheduling, equipment, energy consumption, process data, personnel performance and other closed-loop processes such as "man, machine, material, method, environment, and measurement" to improve the adaptability and agility of production operations, as well as the ability to respond quickly to abnormal and sudden changes, so as to create a stable, reliable and comprehensive manufacturing collaborative management platform for enterprises.

### System highlights

- Support industry diversification, business scenarios, and docking systems
- Support real-time planning sorting, real-time data tracking, query and traceability, Real-time visibility of production progress and line-side inventory, product quality and real-time monitoring of equipment energy consumption and other functions
- It has more intelligent, reliable and friendly functions such as simple operation, clear layering, flexible configuration, lean and efficient

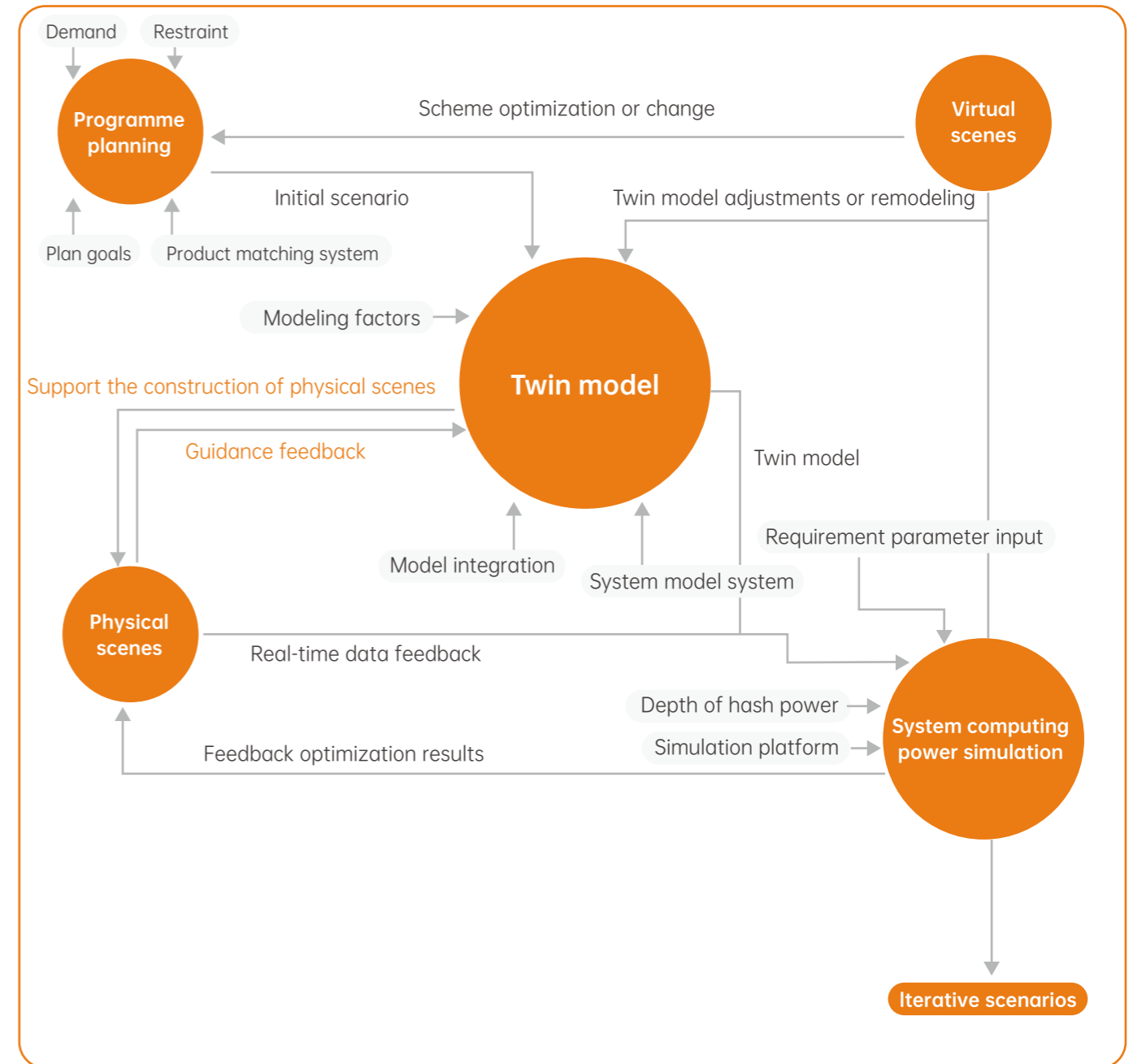
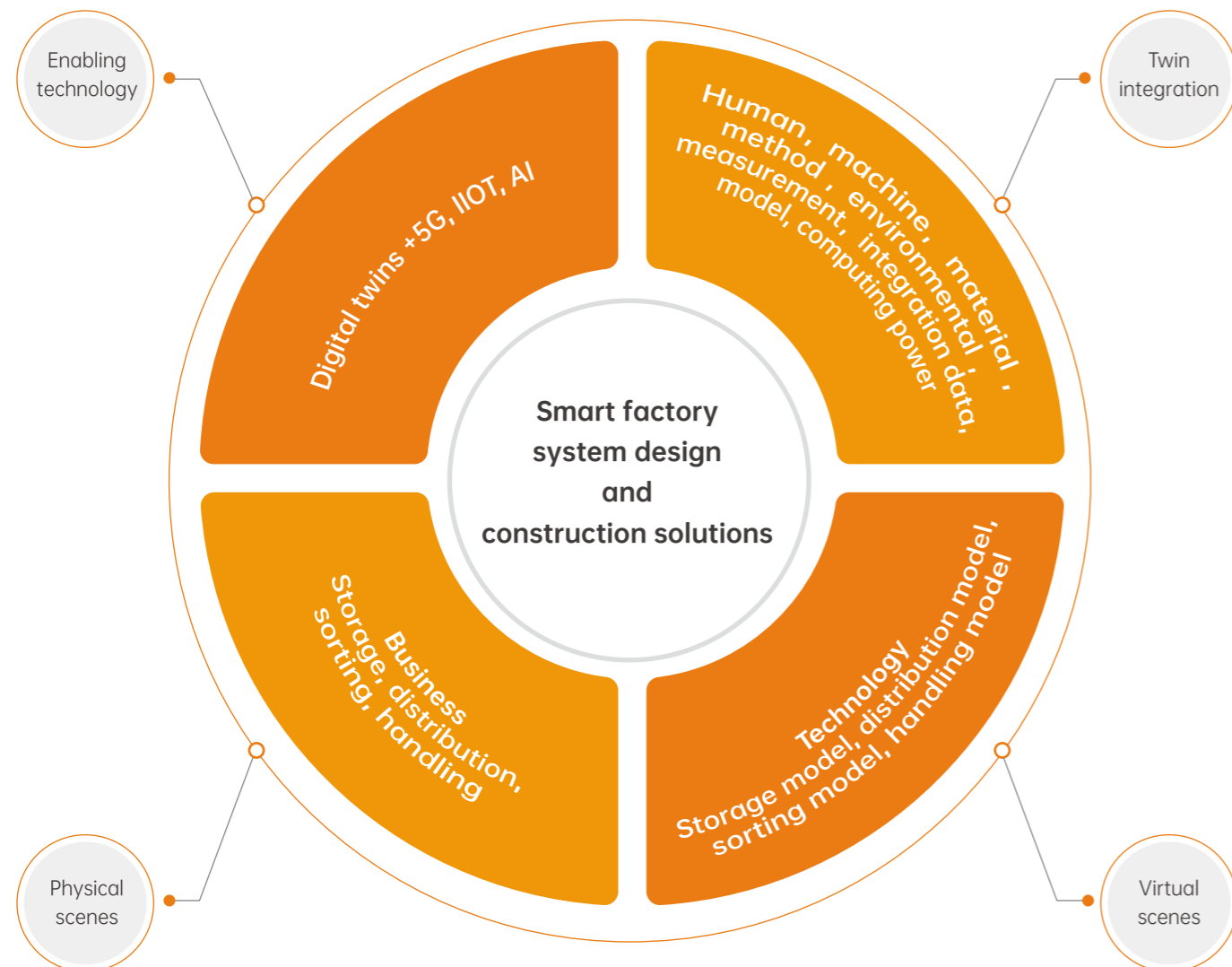


MES APP Interface

# Technical Advantages

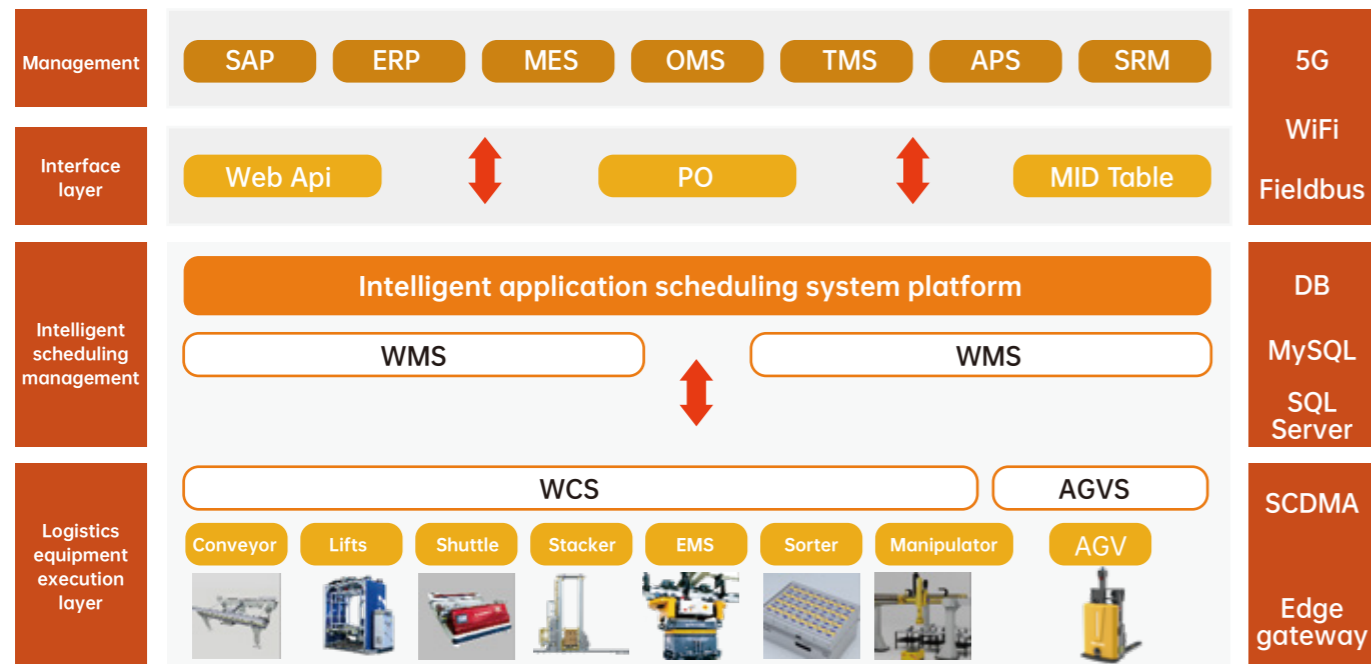
## ■ solution

models, advanced algorithms, we provide customers with the most valuable and optimized system integration solutions based on "5G, AI, IIOT, BD" and other advanced technologies, integrate "CPS + digital twin" planning and design ideas, build a "trinity" integrated service model based on intelligent products, double-wheel closed-loop business technology as the core, software and hardware integration as the support, and end-to-end throughout the life cycle, and is committed to providing customers with collaboration and efficiency. The expert-level customized solution of "four modernizations and two combinations" of flexibility, visualization, vertical and horizontal integration and internal and external integration makes the "human, machine, and material" links in "intelligent logistics and intelligent manufacturing" efficiently connected, and achieves the goals of reducing costs, increasing efficiency, improving quality, reducing consumption and optimizing management, thereby helping enterprises implement the development blueprint and fulfill the digital and intelligent transformation.



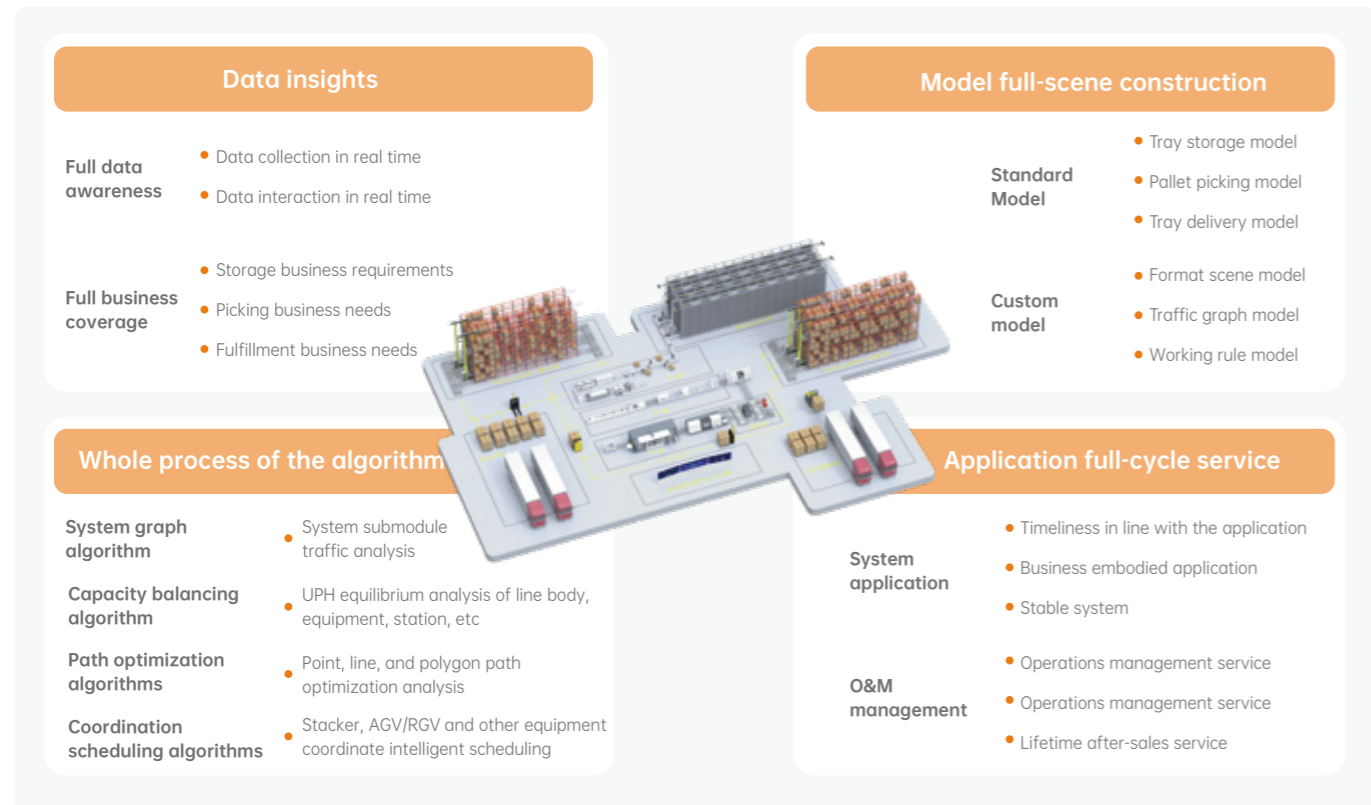
## ■ System platform

Gen-song intelligent system integration system, can be widely docked SAP, Yonyou, Kingdee and other well-known ERP software systems in domestic and abroad, integrated system data can be established in real time on MySQL, SQL Server and other databases, through 5G, Wifi and other communication methods, real-time control of stackers, AGV, shuttle RGV, conveyor and other logistics equipment efficient connection integration, the formation of full-process, full-scenario system business management, and then serve different customer types.



Based on the data foundation, model core, and software carrier, providing an intelligent management and control integrated system analysis and decision-making platform with all-element, full-process, and all-scenario interconnection

Full-process intelligent logistics centralized management and control integrated system platform



# Product Advantages

## Manufacturing Center

The company has comprehensive manufacturing capabilities and quality such as machining, riveting, stamping, forging, electrical processing, painting, precision machine manufacturing, etc., with more than 200 production and processing equipment, including large-scale high-precision laser cutting machines, CNC flame cutting machines, 500T hydraulic presses, machining centers, various CNC machine tools, CNC lathes, shot blasting machines and other advanced equipment, with complete shot blasting, primer, paint, drying lines, forming self-developed and self-produced integrated logistics equipment production and manufacturing capabilities



## Smart products

According to the needs of customer qualitative, different formats, specific scenarios and other needs, the company carries out multi-mode stacker, multi-type AGV, RGV and EMS, chain and roller, sorting and improving product output, matches the hardware basic equipment services of the whole process and full-scenario intelligent logistics system solutions, simulates and analyzes the whole process of hardware products based on scientific finite element analysis methods such as ANS YS, and provides standardized, versatile and modular core equipment products of intelligent logistics system



# Service Advantages

## Implement Safeguards

Gen-Song Intelligent has formulated a complete project management system and strict project management process, continuously implements and strengthens the project manager responsibility system, and ensures the smooth implementation of the project by improving the cooperation between the production department, the technical department and the project management department.



During the implementation of the project, Gensong Intelligent adopts the "1+4" service mode, that is, a project manager leads a planning and design expert, an information system expert, a mechanical design expert, and an electrical control expert to jointly provide technical support for the project, to ensure that the project implementation team obtains the required resources and support in a timely manner.

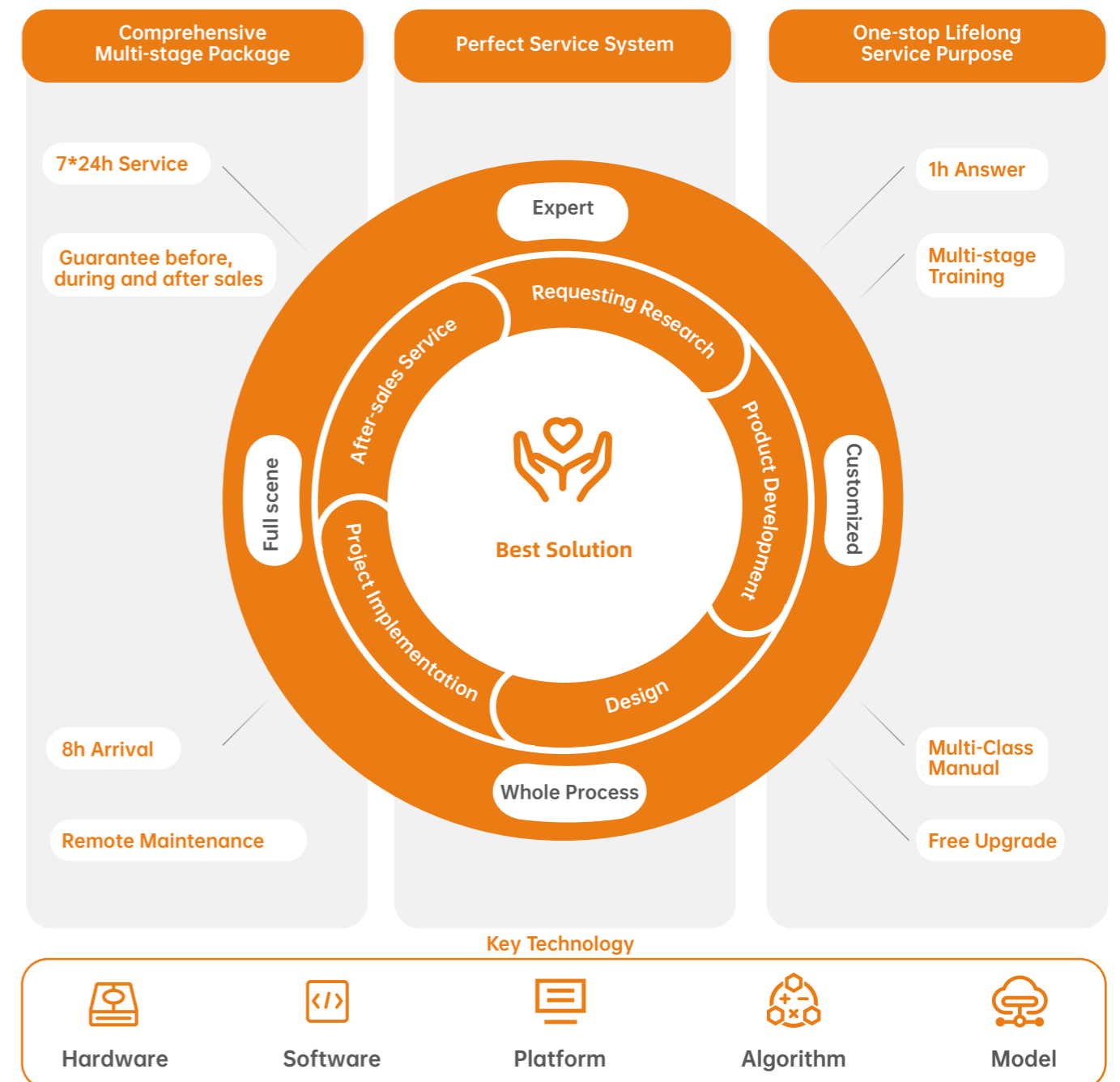
Gengsong Intelligent effectively controls the potential risks in project implementation by continuously strengthening the management and system in the project implementation process.

## Service Process



## Service System

**Service concept:** Provide localized lifelong services covering the whole country, from demand research and program design to product development, project implementation, to after-sales service and remote operation and maintenance of system upgrades, to provide one-stop full life cycle brand power customization quality service.



# Business Layout

## Gengsong Intelligence Helps the Digital and Intelligent Transformation of Industry

As the leading provider of intelligent logistics system integration and manufacturing in the industry, after 15 years of industry experience accumulation and continuous iterative optimization of technology, Gensong Intelligent has successfully landed multiple benchmark projects in multiple industries such as intelligent warehousing and intelligent factories. Recognized by customers and peers; Gensong Intelligent will continue to adhere to the trinity concept of "Product + Solution + Service" to provide impetus for the development of intelligent logistics and intelligent manufacturing industries.

- |                           |                      |                      |                      |
|---------------------------|----------------------|----------------------|----------------------|
| Metallurgical Casting     | Petrochemical        | Food & Furniture     | Textile & Apparel    |
| Mechanical heavy industry | Tobacco & Medicine   | Car Traffic          | New Material Product |
| Power & Electronics       | Packaging & Printing | Cold Chain & Finance | New Material         |
| Rubber & Hardware         |                      |                      |                      |

## Global Projects



30+ Industry Application

700+ Large-scale Integrated Projects

# Service Cases

## Metallurgical Industry

### Ming Tai Group



The first in China to realize the 20-ton aluminum processing industry smart factory project

#### Industry pain points:

- The cargo size is large and the material load is overweight
- The working environment is poor and the work intensity is high
- Long distribution and handling distances, high storage requirements
- No system management, no fool-proof and error-proof, poor accuracy

#### Benefit Presentation:

- Reduce manual work and improve work efficiency
- Realize unmanned handling and distribution, improve the accuracy
- Realize system management, efficient operation of storage and picking
- This project is a demonstration pilot project for the construction of smart factories in the industry

#### Solution:

- The project is designed as a smart factory solution model
- Stacker + sub-cart + AGV + conveying and lifting + WMS/WCS and other soft and hard combination systems to achieve multiple roadways, multiple storage positions, sub-car, AGV and other system operations

## Petrochemical Industry

### LB Group



Take the lead in realizing the intelligent factory project of chemical materials in China

#### Industry pain points:

- There are many types of goods, and the ton bags and barrel irrigation are not uniform
- The safety requirements of the working environment are poor and the work intensity is high
- Long distribution and handling distances, high storage requirements
- No system management, no fool-proof and error-proof, poor accuracy

#### Benefit Presentation:

- Optimize material management and cost control
- The overall logistics efficiency of the enterprise has been improved by nearly 2 times, and the cost has been reduced by about 40%
- This project helps enterprises to build intelligent storage bases with significant competitive advantages in the industry, effectively enhancing the competitiveness of enterprises

#### Solution:

- The project uses intelligent storage solutions
- Using "stacker + RGVS + hoist + system platform" and other modes Realize 18 roadways, multiple RGVs, and nearly 40,000 storage positions for material storage, storage, picking, packaging and other functional operations

## Household Industry

### Huida Sanitary Ware



#### Solution:

- The project is designed as a smart warehouse solution model
- Using single and double stacker + RGV + conveying and lifting + WMS/WCS and other software and hardware combination systems to realize the flexible, fully automated and unmanned warehousing and logistics through the application of new technologies such as intelligent warehousing, intelligent transportation, and intelligent scheduling.

#### National Demonstration Pilot Smart Factory Project in Ceramics Industry

##### Industry pain points:

- There are many types of materials and SKUs, and the product sizes vary greatly.
- The requirements for completeness of materials are high, and the system efficiency is high.
- There are various picking and distribution scenarios.

##### Benefit Presentation:

- Reduce manual work and improve work efficiency
- Realize the integrated operation of storage, picking, and intelligent system application Realize unmanned operation modes such as storage, handling, and distribution
- Realize the system management and control of the whole process of warehouse distribution and optimize operation management

## Textile and clothing industry

### Bosideng



#### Solution:

- The project uses smart factory solutions
- Adopt the mode of "stacker + RGV + AGV + hoist + control system platform"
- Using 38 stacker cranes and a large number of automatic conveying equipment, realize real-time independent distribution, handling, storage, sorting and other operations of raw and auxiliary materials, semi-finished products and finished products for nearly 20,000 goods

#### Well-known clothing enterprise smart factory project

##### Industry pain points:

- There are many types of materials and SKUs, and the product sizes vary greatly, so it takes time to find inventory
- High requirements for material uniformity and high system cycle efficiency
- There are multiple warehouse operations such as raw materials, semi-finished and finished products, and line edges
- No system management, no fool-proof and error-proof, poor timeliness and accuracy

##### Benefit Presentation:

- Reduce manual work and improve work efficiency
- Meet the requirements of material completeness, realize the integrated operation of storage and picking, and apply the intelligent system
- Meet the JIT production mode, optimize and improve the whole process operation from raw materials to finished products, and realize the operation and management goals of smart workshop and smart warehouse

## New Energy Industry

### Zhejiang Huayou New Energy



#### Solution:

- The project is designed as a smart warehouse solution model
- Stacker + RGV + AGV + manipulator + conveying and lifting + WMS/WCS and other soft and hard combination systems to achieve multi-lane, nearly 10,000 storage positions, multiple RGV, AGV and other system operations

#### Lithium battery material industry takes the lead in realizing intelligent storage system

##### Industry pain points:

- There are many kinds of materials and various product sizes
- High operating cycle requirements and high system efficiency
- There are multiple types of picking and distribution scenarios
- No system management, no fool-proof and error-proof, poor accuracy

##### Benefit Presentation:

- Completely solved the contradiction between reducing the storage area and increasing production capacity, and improved the utilization rate of the site
- Reduce logistics storage and transportation costs and improve personnel efficiency
- Improve the automation rate and facilitate product quality traceability

## Food Industry

### Niulanshan



#### Solution:

- The project is designed as an integrated solution model for intelligent warehouse distribution
- Single and double extension stacker + RGV + manipulator + conveying and lifting + WMS/WCS and other soft and hard combination systems to achieve 20 roadways, more than 30,000 storage places, RGV, manipulator and other system operations

#### Well-known food and beverage enterprise smart factory project

##### Industry pain points:

- The size of the goods is not uniform, and there are many types of SKUs
- A large number of storage, transportation, and distribution, the work intensity is very high
- High system efficiency requirements, many stations require a lot of manpower
- No system management, poor timeliness and accuracy

##### Benefit Presentation:

- Reduce manual work and improve work efficiency
- Increased storage capacity; improved accuracy
- Optimize the logistics management process, realize systematic inventory management, realize data visibility, traceability, and collaborative management of production, supply and marketing

## Automobile Industry

### BYD



#### Solution:

- The project is designed as an integrated solution model for intelligent warehouse distribution
- Stacker + RGV + AGV + closed shelf + WMS/WCS and other soft and hard combination systems to achieve multiple roadways, near multiple storage locations, and multiple AGV/RGV system operations

#### Smart factory project of leading enterprises in the automotive industry

#### Industry pain points:

- There are many types of materials and SKUs, and the product sizes vary greatly
- High requirements for material uniformity and high system cycle efficiency
- There are multiple warehouse operations such as raw materials, semi-finished and finished products, and line edges
- No system management, no fool-proof and error-proof, poor timeliness and accuracy

#### Benefit Presentation:

- Reduce manual work and improve work efficiency
- Realize the integrated operation of storage, picking, and intelligent system application. Realize unmanned operation modes such as storage, handling, and distribution. Realize real-time inventory and meet JIT production requirements

## Medicine Industry

### Zhende Medical



#### Solution:

- The project is designed as an integrated solution model for intelligent warehouse distribution
- Omni-directional stacking AGV + narrow aisle AGV + AGVS + WMS/WCS and other soft and hard combination systems to achieve multiple storage positions, multiple workstations, and nearly 30 AGVs orderly and effective operation

#### Well-known medical enterprise smart factory project

#### Industry pain points:

- There are many types of material SKUs, and the operation efficiency is high
- The work is intensive and requires a lot of manpower
- Many workstation interactions and low delivery efficiency
- No system management, no fool-proof and error-proof, poor accuracy

#### Benefit Presentation:

- Reduce manpower and forklift equipment, reduce logistics costs
- Unmanned operation process; improved operation efficiency and distribution accuracy, increased storage space, and realized systematic management and control

## Cooperating Clients

