

新松 移动机器人系统

MOBILE ROBOT SYSTEM

新松 移动机器人系统

MOBILE ROBOT SYSTEM

新松机器人自动化股份有限公司
SIASUN ROBOT & AUTOMATION CO., LTD.

Add: 中国沈阳浑南新区金辉街16号
No. 16 Jinhui Street, Hunnan New District, Shenyang, P. R. China
E-mail: market@siasun.com
Tel: 400-800-8666

添加新松微信账号: siasunrobot
关注新松微博: <http://e.weibo.com/siasunrobot>

<http://www.siasun.com> <http://www.agvs.cn> <http://www.hzsiasun.com>



新松机器人自动化股份有限公司
SIASUN ROBOT & AUTOMATION CO., LTD.



新松机器人自动化股份有限公司 SIASUN Robot & Automation CO., LTD

新松公司（股票代码：300024）创立于 2000 年，隶属中国科学院。是目前国内规模大、产业线全、最具影响力的高端装备产业集团。公司立足自主创新，以独有技术、核心零部件、领先产品及完整的行业技术解决方案，形成了工业机器人、自动化成套生产线、智能物流、轨道交通、激光技术装备、节能环保装备、洁净装备、能源装备及智能服务机器人等九大产业群组。公司通过技术与制造的结合，技术与行业的结合，为欧、美、亚洲等十多个国家和地区提供先进的产品及服务，全方位满足工业、交通、国防、能源、民生等国民经济重点领域对以机器人及自动化技术为核心的高端装备需求。

新松公司现在有员工 1500 余名，75% 以上中高级技术人才，形成了以院士、博士及高级专家为核心的国家级创新团队。目前，新松公司拥有专利数百项，拥有逾千家业内尊贵的客户，完成国家重大科技攻关近百项，起草并制定了多项国家行业标准。公司拥有“机器人国家工程研究中心”、“国家认定企业技术中心”、“国家 863 计划机器人产业化基地”、“国家博士后科研基地”等。公司在北京、上海、杭州、深圳及沈阳设立五家控股子公司，在广州和山东设有机器人国家工程中心分中心，完成了全国化的战略布局。致力于发展成为具有国际竞争力的高端装备产业集团，打造世界一流的高技术企业。

SIASUN Robot & Automation CO.,LTD (stock code: 300024), founded in 2000, is a affiliate of Chinese Academy of Sciences. SIASUN has been one of the biggest size, most products range and most influential advanced equipment manufacturing industry groups in China. Based on its self innovation, individual technologies, core parts, leading products and complete industrial technology solutions, SIASUN has formed 9 industrial groups, namely Industrial Robot, Automated Test & Assembly Line, Logistic Automation, Rail Transit Automation, Laser Technology & Equipment, Eco-friendly Equipment, Clear Room Automation, Energy Source Equipment and Intelligent Service Robot. Through combining technologies with manufacturing & technologies with industries, SIASUN has provided products and services to customers in over 10 countries in Europe, America and Asia, totally meets the needs of high-end equipments driven by robot and automation technologies in the industries of manufacturing, transportation, military, energy and civil. SIASUN has over 1500 employees—75 % are medium and senior technical talents, which form a state-level R&D team on the strength of academicians, doctors and advanced experts. At present, SIASUN holds hundreds of patents, owing over 1000 valued customers. Many national standards have been stipulated, over 100 science & technology key projects have been finished. SIASUN got the award of National Engineering Research Center on Robotics, National Authorized Enterprise Technology Center, Robot Industrialization Base of the National 863 Program and National Post-doctoral Research Base, etc. SIASUN has finished nationalized strategic layout, with five holding subsidiaries in Beijing, Hangzhou, Shanghai, Shenzhen and Shenyang, moreover, it has set up two branches of National Engineering Research Center on Robotics in Shandong and Guangzhou. SIASUN aims to become an international competitive high-end equipment manufacturing industry group, and one of the best high-tech enterprises in the world.



智能AGV自动化系统 Intelligent AGV Automatic System

新松公司作为“机器人国家工程研究中心”、“国家 863 计划智能机器人主题产业化基地”和科技部命名的“国家高技术研究发展计划成果产业化基地”，新松（原中科院沈阳自动化研究所）早在 20 世纪 70 年代末 80 年代初，就开始了对 AGV 基础性技术研究，AGV 产品真正走向市场是在 1991 年承接某客户“总装车间发动机、油箱、后桥 AGV 及副环线装配系统”项目。从 2007 年开始，拥有自主产权的新松 AGV 产品开始批量出口到美国、加拿大、俄罗斯、韩国、印度等国外市场，开创了国产机器人出口的先河。

新松 AGV 以用户需求为最高原则、为用户量身定制个性化解决方案为宗旨，形成系列化、多型号的 AGV 产品。新松 AGV 支持电磁导航、磁带导航、激光导航等多种导航方式，供电方式分为电池供电及感应供电。如今，新松的 AGV 产品已经走上了产业化发展道路，自主品牌占据国内 AGV70% 以上的市场份额。广泛应用于汽车制造、机械加工、电子、纺织、造纸、医药、卷烟、食品、图书出版等行业。

As the National Engineering Research Center on Robotics, Robot Industrialization Base of the National 863 Program and Achievement Industrialization Base of the National Hi-Tech R&D Program (given by The Ministry of Science and Technology of the People's Republic of China), SIASUN has started AGVs fundamental research at the end of 1970s. Along with the completion of project "AGV assembly system for motor, fuel tank and rear axle in general chassis plant" in 1991, SIASUN AGVs have successful stepped into market. From the year of 2007, SIASUN AGVs that with self-property right have been batch exported to America, Canada, Russia, Korea, India, etc. which has rewritten the history of domestic robots on SIASUN places customer needs as the most important principle by providing custom solution, and develops different types of AGVs. SIASUN AGVs support different ways of navigation: electronic magnetic navigation, magnetic tape navigation and laser target navigation, etc. Power supply mode can be battery or Inductive Power Transfer (IPT). Now SIASUN AGVs have entered industrialization period these days, and its self-owned brand has taken up more than 70 % of the present market share. SIASUN AGVs are extensively be used in the fields of automobile manufacturing, machining, electro, spinning, papermaking, medicine, tobacco, food and publishing.

目录 Index >>>

01	公司简介	SIASUN Introduction
02	智能AGV自动化系统	Intelligent AGV automatic system
03	国内项目——搬运型AGV	AGV Domestic Projects-Transport AGV
09	国内项目——装配型AGV	AGV Domestic Projects-Assembly AGV
13	出口项目	International Projects
15	设计手段仿真AGV	AGV Design Method & Simulation

16	国际合作	International Corporation
17	技术路线	Technology Roadmap
18	控制台及调度管理系统	Console & Dispatching Management System
19	殷切期望	Concern & Expectation
20	企业荣誉	Enterprise Honor
21	我们的服务	Our Service
22	逾百家尊贵客户	More than one thousand valued customers

搬运型 AGV

Transfer

应用案例 Application Cases

发动机测试间运输型 LGV Transport LGV in Engine Testing Room

柴油机辊道移栽搬运型 AGV 是新松公司根据柴油机测试车间物料输送的实际要求而开发设计的系列产品。其运行控制采用新松标准的 AGV 控制模式，驱动方式采用双舵轮驱动实现 AGV 全方位运行，导航方式采用激光导航，根据负载大小形成系列产品。

SIASUN Transport AGV (Roller Conveyor) for Diesel Engine is designed to move loads in diesel testing room, which adopts SIASUN standard AGV control mode, laser navigation and two steering wheel driving mode to realize omni-directional movement. It can be custom made according to the load.



应用于潍柴动力股份有限公司现场
AGVs applied in Weichai Power



应用于安徽全椒动力股份有限公司现场
AGVs applied in Anhui Quanjiao Engine CO.,LTD



应用于中国重汽济南动力有限公司现场
AGVs applied in SINOTRUK Jinan Power CO.,LTD



应用于广西玉柴动力公司4F现场现场
AGVs applied in Guangxi YUCHAI Power Machinery CO.,LTD (4F)

搬运型AGV是用于货物或托盘的转载、运输，按照货物接驳的方式可以分为通用辊道移栽搬运型AGV、柴油机辊道移栽搬运型AGV、叉式搬运型AGV、电表箱推挽移栽搬运型AGV、夹抱搬运型AGV、升降接驳搬运型AGV等，用户可以根据需要搬运货物的种类以及不同接驳形式选择不同的搬运型AGV产品。

Transport AGV is designed to transport goods & tray. According to different loads, transport AGV can be types of general roller conveyor unit load AGV, diesel roller conveyor unit load AGV, forklift AGV, electricity meter box push-pull transport AGV, clamp transport AGV, lift/lower transport AGV, etc. Customers can select the suitable AGV to fit for their needs of material handling.

夹抱搬运型 LGV Clamp LGV

夹抱搬运型 LGV 是新松公司根据圆形物料输送的特殊要求而研发的 AGV 产品，主要由 AGV 车体、提升装置及夹抱翻转装置等组成。该设备承担圆形物料的夹抱、提升、翻转、运输、下降、松开等工作，AGV 上的物料可以实现一定角度的翻转。

Clamp Transport LGV is designed to lift, rotate and stack rolls, which consists of hydraulic roll clamps, AGV body and rotational device, etc. Clamp AGV can carry out roll's clamping, lifting, rotation, transportation and lowering.



叉式运输型 LGV Forklift LGV

叉式搬运型 AGV 是新松公司根据不同行业的实际要求而研发的系列激光导航 AGV 产品，主要由 AGV 车体、升降装置等组成。该设备承担空托盘、带载托盘、纸卷等升降搬运工作。

Forklift AGV is a type of laser navigation AGVs, which mainly consists of AGV body, lifting device, etc. It can be used for transportation for empty tray, loaded tray and paper roll.



搬运型 AGV

Transfer

应用案例 Application Cases

重载 AGV Heavy-duty AGV

重载 AGV 主要应用于仓储、制造、港口、机场、危险场所、特种行业等场所，它的研制成功不但填补了国内重载物料搬运机器人领域的空白，还将有力提高重载领域物流自动化的水平，减轻人的劳动强度，对提高生产效率，缩短物流周期，加速资金周转，提高经济效益都具有重要的现实意义。

Heavy-duty AGV can be used in application of storage, manufacturing and sites including harbor, airport, risk area and special industry. Its successful invention not only filled up the gap of domestic heavy materials' robot transportation, but also has a significant meaning in increasing automation level in heavy-load material handling, reducing labor intensity, increasing production efficiency, reducing logistics cycle, accelerating capital turnover and improving economic returns.



轨道穿梭车 (RGV) Rail Guided Vehicle RGV

轨道穿梭车是快速、灵活且便于安装的物料输送系统。RGV 具有分拣和收集特性，可用于多个立体自动仓库巷道输送站。它可以根据订单行进行拣选，以及根据一个位置的目的地进行分拣。

RGV as a part of sorting tool used to transfer the goods from warehouse to outside. It features with sorting and collecting functions, which can be used as the transmission stations of multi-automatic warehouse. Meanwhile, RGV can make sorting according to the orders.



升降移栽运输型 AGV Lift/lower Transport AGV

升降接载搬运型 AGV 是新松公司根据化工行业客户的要求而研发的背负式 AGV 产品，主要由 AGV 车体、升降定位装置等组成。该设备承担物料罐体升降接货、运输、升降卸货等工作。

Lift/lower Transport AGV is a type of unit load AGVs designed to meet customers' needs in chemical industry. It consists of AGV body, lift/lower equipment and positioning device, etc. It can carry out material tank transportation, lifting and unloading.



辊道移栽运输型 AGV Roller Conveyor Transport AGV

通用辊道移栽搬运型 AGV 是新松公司根据物料输送的实际要求而开发设计的系列产品。其运行控制采用新松标准的 AGV 控制模式，按照驱动方式分为双轮差动、单舵轮驱动、双舵轮驱动；按照导航方式分为磁导航和激光导航。车体上安装不同类型的输送辊道实现货物的单向自动转载或双向自动转载。

General roller conveyor transport AGV is designed to meet the needs of material handling. Its movement control adopts SIASUN standard AGV control mode. According to drive mode difference General Roller conveyor transport AGV can be type of differential-wheel drive unit, single steering wheel drive unit, and double steering wheels drive unit. Its navigation mode adopts magnetic or laser. By installing different roller conveyor, this AGV can realize one/dual directional loading & unloading.



搬运型 AGV

Transfer

应用案例 Application Cases

简易输送型 AGC

Transport Automated Guided Cart AGC

简易输送型 AGC 是新松公司根据不同的客户需求提供的系列简化的 AGC 系统，满足车间智能物流输送。主要应用于汽车零部件行业、电子产品、压缩机零部件等车间输送。

Transport AGCs is a custom simplified AGV system used for intelligent material handling process in workshop. Its application areas include automobile parts manufacturing, electronics, compressor parts and transportation in workshop.



应用于西安法士特有限责任公司现场
Applied in Xi'an Fast Auto Drive Group



适用于物料车潜入式拖运AGC
Used for material truck flushed type AGC



应用于安徽美芝精密制造有限公司现场
Applied in Anhui Meizhi Precision Manufacturing Group

巡检 AGV

Patrolling AGV

智能巡检AGV是新松公司根据变电站、地下隧道等危险工作环境而研发的，主要由AGV车体、智能监控装置等组成。该设备承担危险区域摄像、图象传输工作，便于操作人员远距离监控、操作AGV运行等工作。

Patrolling AGV is designed for video recording, video transmission in risk areas (Such as transmission substation, underground tunnel, etc.). Operator can remotely monitor on-site situation and control AGV movement.



娱乐型 AGV

Entertainment AGV

娱乐型AGV是为沈阳棋盘山国际象棋旅游景点开发设计的象棋棋子动态演示系统工程。

Entertainment AGV is designed for chess dynamic displaying system of Shenyang Qipanshan Chess Park



推挽移栽运输型 AGV

Push-pull Transport AGV for Electricity Meter Box

电表箱推挽移栽搬运型 AGV 是新松公司根据电表测试车间物料输送的实际要求而开发设计的系列产品。其运行控制采用新松标准的 AGV 控制模式，驱动方式双轮差动实现 AGV 前进、后退、转弯运行，导航方式采用磁导航，根据生产工艺规划分为单叉和双叉两种产品。

Push-pull Transport AGV for Electricity Meter Box is designed to meet the needs of material handling in electricity meter testing room. Its running mode adopts SIASUN standard AGV control mode. Differential-wheel drive provides AGV the abilities of moving forward, backward and turning. It adopts magnetic navigation, and can be equipped with one fork or dual-fork according to different technical planing needs.



教学演示培训型 AGV

AGV for Education Training AGV

现代教育需要先进的物流设备与教学相结合，新松公司为全国各大院校的物流实训基地规划了很多先进的物流设备，让物流教学真正与国际接轨。

SIASUN designed a lot of modern logistic automation equipments for colleges/universities for the purpose of a more vivid logistic theory education.



装配型 AGV

Assembly

应用案例 Application Cases

电动筒式单举升装配型 AGV Electric single column lifting AGV

AGV-A1000D (2) 型AGV主要由AGV车体、AJS1000型升降机两部分组成。主要适用于小型汽车的动力总成（重量小于 500kg）与白车身合装，用于有压缩减振弹簧的后悬挂总成与白车身合装。

AGV-A1000D(2) is consisted of AGV body and AJS1000 lifting device. It is mainly used in small car power assembly (less than 500Kg) & body's assembly, and rear suspension (with compression springs) & automobile body's assembly.



电动剪式双举升装配型 AGV Electric Scissors Dual Lift Assembly AGV

AGV-A2000A (2) -III 型AGV为新松公司根据用户的要求而研发双举升AGV产品，主要由AGV车体、两台电动剪式升降机等组成。特点是具有更大的承载能力，可实现全方位滑动平台升高自动解锁，满足动力总成托盘自动转载的需要。升降机具有防止坠落装置，安全性、可靠性大大提高。主要适用于底盘线低的动力总成、后悬挂总成与白车身合装。

AGV-A2000A (2) -III AGV is a kind of dual lift AGV developed by SIASUN based on customer requirements. It is mainly consisted of AGV body and two sets of electric scissors lift. It has advantages of much heavier load capacity, omnibearing sliding plate elevation automatic unlocking. It can satisfy the requirements of dynamic compliance plate automatic transfer. The lift has dropping protective setting, which can improve the safety and reliability. It is used for lower chassis dynamic compliance, and used for rear suspension and car body compliance.



装配型AGV是新松公司AGV产品中的核心产品。根据产品用途分为汽车底盘装配型AGV、柴油机装配型AGV和变速箱装配型AGV等，每种类型根据不同用户的要求有更详尽的分类。

Assembly AGVs are the core products of SIASUN AGV. According to function difference, assembly AGVs can divide into assembly AGV for chassis, assembly AGV for diesel and assembly AGV for gear box, etc. Every type of AGV can be custom made based on user's needs.

电动剪式单举升装配型 AGV Electric single scissors lifting AGV

AGV-A1000S1 (1) 型 AGV 主要由 AGV 车体、电动剪式升降机两部分组成。主要适用于汽车的动力总成与白车身合装，用于有压缩减振弹簧的后悬挂总成与白车身合装。

AGV-A1000S1(1) is consisted of AGV body and electronic scissors lifting device. It is mainly used in car power assembly (less than 500Kg) & body's assembly, and rear suspension (with compression springs) & body's assembly.



电动筒式双举升装配型 AGV Electric dual-column lifting AGV

AGV-A2000A (2) -I 型AGV为新松公司根据负载的不断增大，尤其后桥装配需要增加减振弹簧压缩防止白车身顶起的拉紧链条而设计双举升AGV产品，主要由AGV车体、两台AJS1000升降机等组成。主要适用于汽车的动力总成、有压缩减振弹簧的后悬挂总成与白车身合装。

AGV-A2000A (2) -I AGV is a kind of dual lift AGV. Based on the loading increasing continuously, the rear axle assembly needs to add damper spring compression, which was designed to avoid car body interference tightening chain. It is mainly consisted of AGV body and two sets of AJS1000 lift. It is used for dynamic compliance, and used for compression damper spring rear suspension and car body compliance.



装配型 AGV

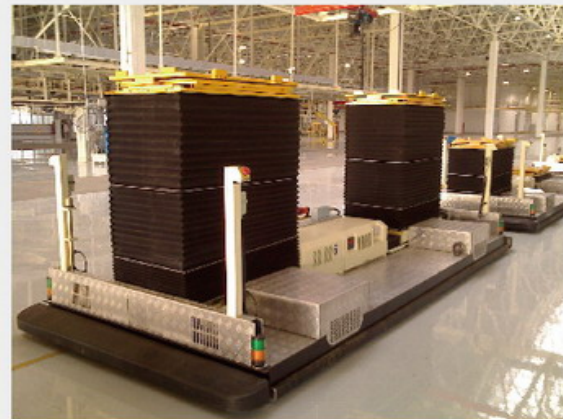
Assembly

应用案例 Application Cases

液压剪式双举升装配型 AGV Hydraulic Scissors Dual Lift Assembly AGV

AGV-A2000A (2) - II 型AGV是新松公司为满足用户的特殊要求而研发双举升AGV产品，主要由AGV车体、两台液压升降机等组成。特点是全方位滑动平台上表面到地面高度小，避免侧移进入装配段与吊具干涉。主要适用于底盘线很低的动力总成、后悬挂总成与白车身合装。

AGV-A2000A (2) - II AGV is a kind of dual lift AGV developed by SIASUN based on customer special requirements. It is mainly consisted of AGV body and two sets of hydraulic lift. It has advantages of lower height from the surface of omnibearing sliding plate to ground, which can avoid clamping interference during assembly. It is used for lower chassis dynamic compliance, and used for rear suspension and car body compliance.



非接触供电装配型 AGV

Inductive Power Transfer Assembly AGV

随着IPT (Inductive Power Transfer) 非接触供电技术的发展，将IPT非接触供电技术应用于AGV物流运输系统，将极大改善目前AGV供电系统的缺陷。这种供电系统可以在AGV不带电池的情况下为小车提供驱动电源和控制电源，也可以在不设充电站的情况下为AGV的电池进行连续或定时充电。

As the development of the Inductive Power Transfer technology, it has been applied in the AGV logistic transportation system, which has greatly improved the defects of AGV power system. This power system can provide drive power and control power when AGV does not carry the batteries. And it can also charge AGV batteries continuously or timely when there is no charging station.



电动剪式三举升装配型 AGV

Electric Scissors Triple lifts AGV

AGV-A2000A (2) -VI 型 AGV 为新松公司根据底盘合装工艺的要求而研发的三举升 AGV 产品，主要由AGV 车体、两台电动剪式升降机、载人提升机等组成。特点是具有更大的承载能力，配置的螺旋提升机具有防坠落保护装置，安全性、可靠性大大提高。主要适用于底盘线很低的动力总成、后悬挂总成与白车身合装。

AGV-A2000A (2) -VI AGV is the triple lifts AGV products, which was developed for chassis marriage techniques. It composed of AGV body, two electric lifts, on-board lift etc. It has high load capacity and it is configured with spiral lift, which has the anti-drop device. Therefore, it is safe and reliable. This product is mainly used for power assembly, rear suspension assembly and car body marriage under lower VAC line.



变速箱装配型 AGV

Gearbox Assembly AGV

该类型AGV用于各种类型变速箱装配线进行变速箱输送、装配，根据系统装配工艺要求分为平置式变速箱装配型AGV、纵翻式变速箱装配型AGV和横翻式变速箱装配型AGV，新松公司根据不同类型的变速箱结构配置相应的定位夹具可以满足不同类型变速箱的装配要求。由变速箱装配型AGV产品及周边设备构成的AGV系统分别进行变速箱装配、输送，具有分段停止、放行功能的AGV可实现在任何装配工位对变速箱进行静态装配。导航方式采用磁导航，改变导航磁条可以适应生产工艺变更的要求。

This type AGV has been used to all types of gearbox assembly for gearbox transmission and assembly. According to the system installation technical requirements, it can be divided into flat gearbox assembly AGV, vertical overturn gearbox assembly AGV, and horizontal overturn gearbox AGV. SIASUN supplies the related locating tooling based on different gearbox structure, which can satisfy the requirements of various gearboxes. The gearbox assembly AGV and its surrounding equipment compose of AGV system to make gearbox assembly and transportation. This AGV can be stopped and released at stations, which can realize the static assembly at any station. The navigation adopts magnetic navigation. Changing the navigation method can satisfy different technical requirements of the productions.



发动机装配型 AGV

Engine Assembly AGV

发动机装配型AGV是新松公司根据柴油机装配的要求而研发集升降、翻转、盘车于一体的AGV产品，主要由AGV车体、丝杆升降装置、翻转盘车装置等组成。该设备承担柴油机装完缸盖后柴油机整机装配任务。由计算机控制的空中自行葫芦将柴油机送到指定点后，柴油机通过飞轮壳与AGV小车上的法兰盘相连接。然后在固定的环形路线依次经过各个工艺停车点（工位）进行相应工艺内容的装配工作，完成全部预定的工作内容后，再停靠到指定的站点由人工将柴油机吊放到测试输送线上，完成一个工作循环。

The engine assembly AGV is developed in accordance with the requirements for diesel engine assembly, which integrated lifting up and down, turnover, jigger tighter. It is mainly consisting of AGV body, screw lift device, turnover jigger device etc. It is used to the whole diesel engine installation after the cover is installed. The hoist will send the diesel engine to the indicated location, which is controlled by computer. The diesel engine connects with the flange of AGV by bell housing. Then it continues the assembling at each technical stop station in a fixed loop track to complete the preserved work. And then it stops at the indicated station and will be put into the testing transportation line manually, so as to complete one work cycle.



出口项目

Export Projects



应用于通用汽车俄罗斯工厂
General Motors Russia



应用于通用汽车加拿大工厂
General Motors Canada



应用于福特汽车印度工厂
Ford India Pvt Ltd



应用于通用汽车墨西哥工厂
General Motors Mexico



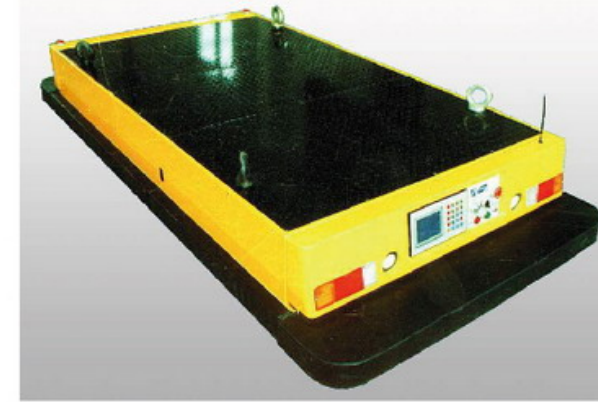
应用于通用汽车乌兹别克斯坦工厂
General Motors Uzbekistan



应用于美国通用汽车公司底特律厂
General Motors U.S. (Detroit)

新松AGV有功能稳定、运行可靠、性价比高多种优势，在全球两大汽车厂商通用和福特海外生产基地都应用新松AGV产品，特别是2007年，新松一举拿下通用汽车公司全球多个新建厂项目的底盘合装工程，成功出口到通用汽车全球各地工厂。至2011年，新松出口总量达到145台，成功地在国际机器人市场占有一席之地。

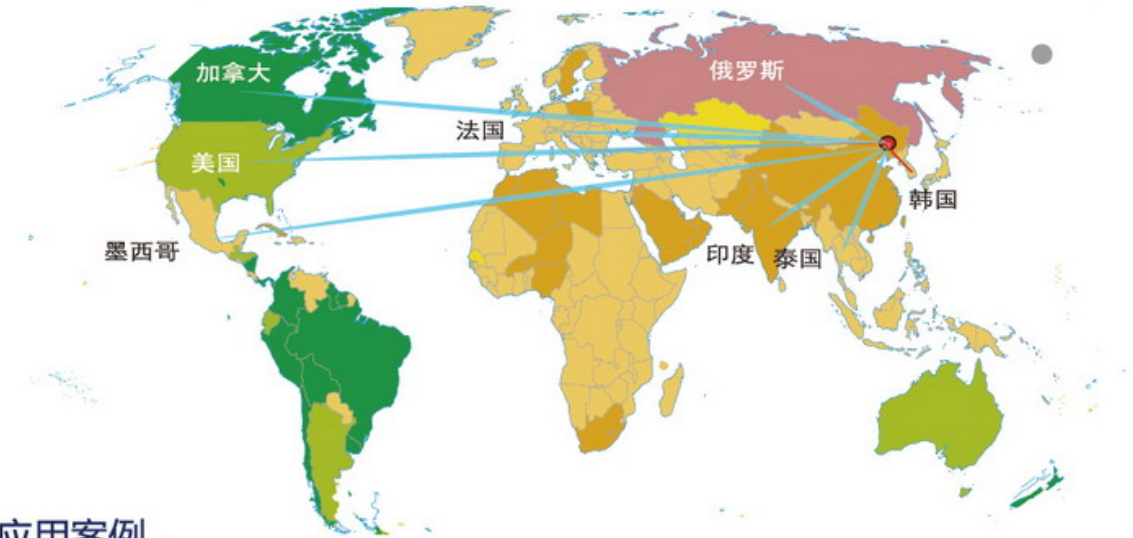
SIASUN's AGV systems have plenty of advantages such as stable functionality, reliable operation, and high cost performance. Our AGV products have been widely applied in many overseas production bases of the two global famous automobile manufacturer General Motors and Ford. Especially, in 2007, SIASUN has won several chassis decking projects of General Motors' greenfield programs, which made SIASUN successfully export AGV systems to the GM factories all over the world. Till 2011, SIASUN has exported 145 AGVs totally and gained good reputation in international robot market successfully



应用于韩国三星航空株式会社
Korea Samsung Aviation Co., Ltd



应用于韩国通用汽车有限公司
General Motors Korea Company



国外应用案例

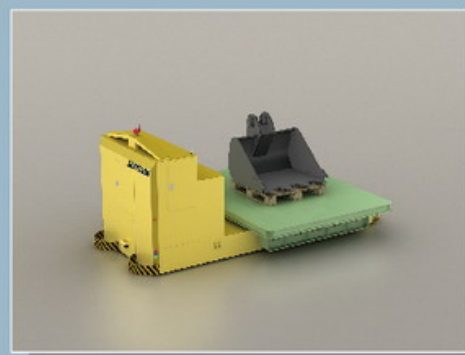
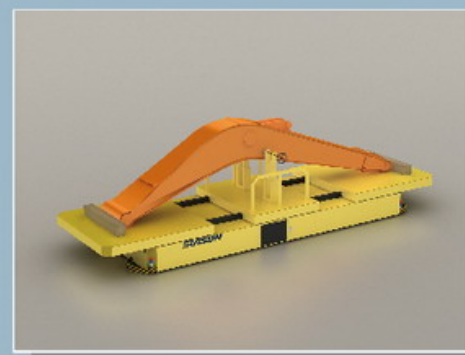
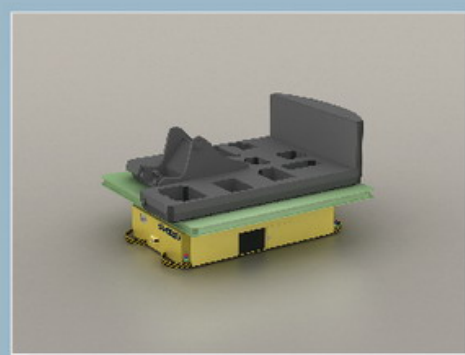
Overseas Applications

客户名称 Customer List	投产日期 Production Date	内容 Contents	AGV数量(台)
韩国三星航空株式会社 Korea Samsung Aviation Co., Ltd	1997	AGV系统及技术 AGV System & Technology	1
通用汽车墨西哥工厂 General Motors De Mexico	2008.11	总装线发动机及后桥双举升AGV装配系统 Dual Lifts AGV system for engine and rear suspension decking in GA Shop	14
通用汽车印度工厂 General Motors India	2008.11	总装线发动机、后桥AGV装配系统 AGV system for engine and rear suspension decking in GA Shop	8
通用汽车加拿大工厂 General Motors of Canada	2008.12	总装线发动机及后桥双举升AGV装配系统 Dual Lifts AGV system for engine and rear suspension decking in GA Shop	47
通用汽车俄罗斯工厂 General Motors Auto LLC	2008.12	总装线发动机及后桥双举升AGV装配系统 Dual Lifts AGV system for engine and rear suspension decking in GA Shop	6
韩国通用汽车有限公司 General Motors Korea Company	2009.3	总装线发动机及后桥双举升AGV装配系统 Dual Lifts AGV system for engine and rear suspension decking in GA Shop	26
美国通用汽车公司底特律厂 General Motors U.S. (Detroit)	2009.11	总装线发动机、后桥AGV装配系统(剪式举升) Dual Lifts AGV system (Scissors type) for engine and rear suspension decking in GA Shop	26
福特汽车印度工厂 Ford India Pvt Ltd	2009.11	总装线发动机、后桥AGV装配系统(剪式举升) Dual Lifts AGV system (Scissors type) for engine and rear suspension decking in GA Shop	8
通用汽车乌兹别克斯坦工厂 General Motors Uzbekistan	2011.10	总装线发动机及后桥双举升AGV装配系统 Dual Lifts AGV system (Scissors type) for engine and rear suspension decking in GA Shop	9

设计手段仿真AGV AGV Simulation

随着现代工业不断发展，客户对产品质量要求逐步提高，新松 AGV 产品全部以计算机为手段，以网络为基础、建立现代企业运营管理，运用工程设计新理论、新方法，通过计算机对结果最优化，设计过程高效化，来对产品进行设计。采用并行设计、优化设计、虚拟设计、绿色产品设计等先进设计理念相结合，不断满足客户对质量、技术、服务更高要求，创造行业价值。

As the continuous development of the modern industry, customers require improving high-quality products. Therefore, SIASUN takes the computer as the media, the network as the basis to efficiently optimize the product design through its modern enterprise management and the applications of new principle and methods on project designs. During the product design process, many advanced design principles and ideas have been applied such as parallel design, optimization design, virtual design, and environmental friendly design etc. In this way, SIASUN has continuously satisfied the customer's higher requirements on quality, technology and service and created industry values.



国际合作 International Corporation

KOLLMORGEN

Because Motion Matters™

美国科尔摩根

SEW
EURODRIVE

德国 SEW 公司

SICK

德国 SICK 公司

wampfler
solutions for a moving world

德国 Wampfler 公司

VAHLE
ELECTRIFICATION SYSTEMS

德国 VAHLE 公司

近年来，新松公司在不断加大自主创新力度同时，积极与国际知名企业合作。新松公司立志创造国际品牌，在产品、技术及管理等方面积极与国际接轨，走国际化的发展道路。新松先后与国际上知名 KOLLMORGEN 公司、SEW 公司、sick 公司、Wampfler 等开展互相学习与培训，并在国内多个 AGV 应用领域展开合作。通过与国外伙伴的合作和本着科技需要精益求精的产品研发观点，新松的技术实力不断提升，不断推出更贴合客户需求的高质量产品。

Recent years, SIASUN continue to increase the intensity of independent innovation and at the same time, actively cooperate with the international well-known enterprises. SIASUN is striving to create international brand product and take the international development road by conforming international standard in terms of product, technology, management, etc. SIASUN has cooperated with many international well-known companies such as KOLLMORGEN, SEW, sick and Wampfler by mutual learning and training as well as many domestic AGV application field. With foreign partner's cooperation and the spirit of science and technology need to refine, SIASUN technology keeps improving and continues to produce high quality products catering to customers' needs.

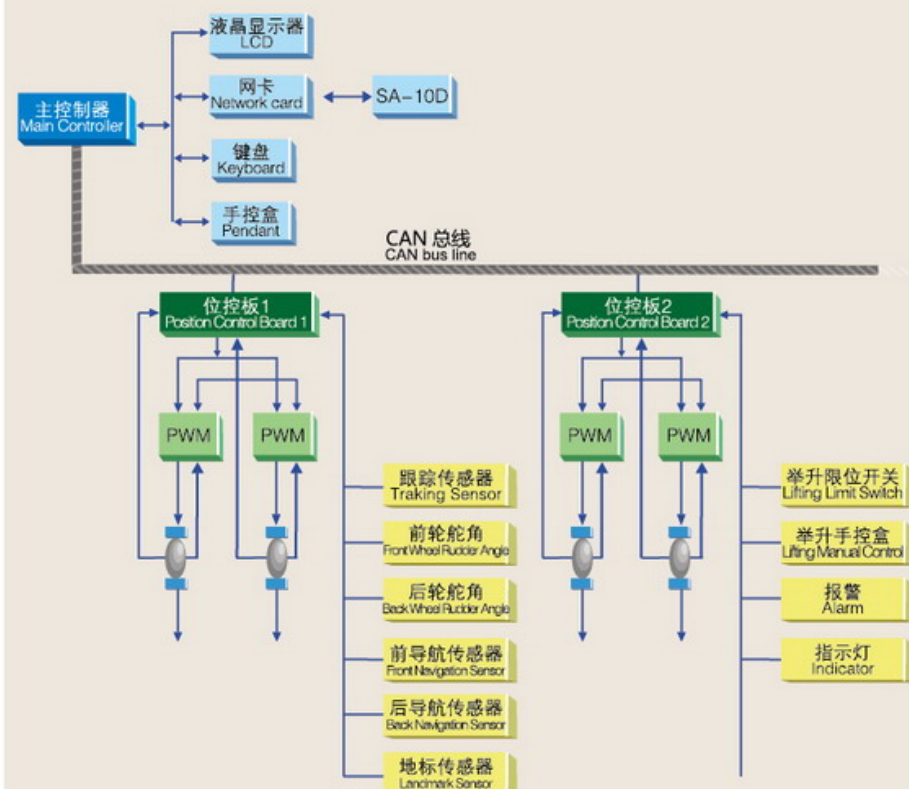
合作伙伴 partner

新松 AGV 导航方式支持电磁导航、磁带导航、激光导航等多种导航方式，供电方式分为电池供电及感应供电。至今，新松已在国内外提供了 800 多台 AGV 系统应用系统，拥有许多经典成功案例，尤其是国内外汽车总装生产线上使用的装配型 AGV，处于行业领先地位。

SIASUN AGV navigation supports electromagnetic navigation, magnetic tape navigation, laser navigation and other navigation mode, and the power supply contains battery powered and induction power supply. Up to now, SIASUN has provided more than 800 sets of AGV system at home and abroad and has many classic successful cases particularly the assembly type AGV used for automobile assembly production line in domestic and abroad, which is in the leading position in the industry.



技术路线 Technical route



嵌入式CAN总线主控制器 Embedded CAN bus master controller

该主控制器使用工业级嵌入式主机做为主计算机，在控制器内集成了主机、电子盘、网卡、CAN 通讯端口、串口等高速运算主机所需的部件及通讯部件，进行独立封装后制成 AGV 专用控制器，该控制器内部集成了 AGV 控制所需的最基本单元，控制器本身无任何扩展插槽，使用简单电源供电，面板上有一个显示器输出端口、一个网络端口、一个键盘及鼠标通用接口、两个 RS232 串口、两个 CAN 通讯端口，控制器及基本控制 I/O。

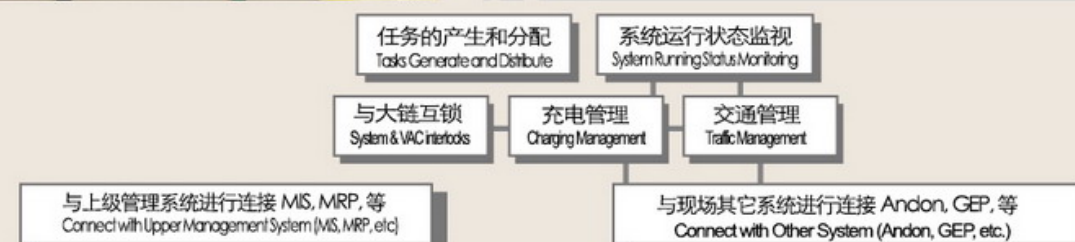
The main controller takes use of industrial embedded host as the main computer, and integrated the requested parts and communication components such as host, electronic disk, card, CAN communications port, serial port and so on. It will be made into AGV controller after package independently, which is integrated with the most basic unit AGV required. The controller itself has no any expansion slot, and it takes use simple power supply with a display output port, a network port, a keyboard and mouse interface, two RS232 serial port, two CAN serial communication port, the controller and the basic control of I/O.

控制台及调度管理系统 Console and Scheduling Management System

AGV 控制台 AGV Console

控制台负责 AGV 运行中的交通管理。保证运行中的 AGV 与 AGV 间的最小间距，使其不发生碰撞和 AGV 追尾等事故，AGV 控制台内有避碰参数设置文件，可对不同的区域设置不同的避碰原则，有效控制各种条件下 AGV 的安全间距。控制台将对进入系统和退出系统的 AGV 进行管理，以保证系统安全运行。

AGV console works as AGVs' traffic guidance, and ensures the minimum space between two vehicles to prevent rear collision incident. There is a collision prevention setting file in the system. Users can adjust parameters according to different sites to keep the safety separation distance between AGVs. AGV console also manage online/offline AGVs to ensure the system safe operation.



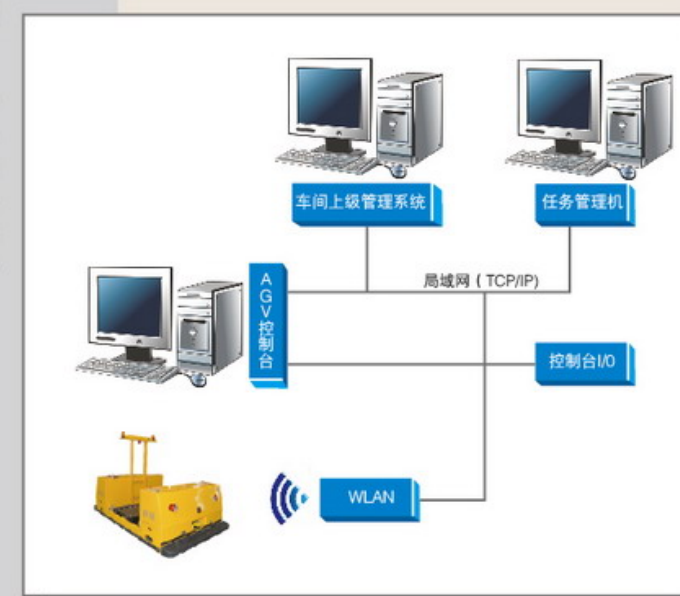
调度管理系统 Scheduling Management System

AGV 调度管理系统采用集中调度管理方式，控制台根据生产管理系统的运输任务，AGV 的工作状态、运行情况，通过通讯系统将命令和任务传递给被选中的 AGV，被选中的 AGV 根据控制台的命令完成发动机的输送和辅助装配。任务完成后，AGV 通知控制台任务完成情况，并回到待命位置，等待下一次任务。

AGV scheduling management system adopts centralized management. AGV Console selects AGVs and passes tasks to AGVs through communication system based on production management system, AGV running status and working condition. The selected AGVs carry engine and finish auxiliary assembly according to the commands come from the console. As long as the assignments were finished, AGVs give notice to the console, back to standby position and wait for next mission.

AGV 调度管理系统主要完成下述任务 AGV scheduling management system mainly tasks

- | | |
|------------|---------------------------------|
| 任务的接收和分配 | Task receiving and allocation |
| 多 AGV 状态监测 | Multi-AGVs Status monitoring |
| 多 AGV 的避碰 | Multi-AGVs collision prevention |
| 充电的控制和监视 | Charging Control & Monitoring |



殷切期望

Concern and Expectation

作为国家机器人产业化基地，新松公司发展的每一步都始终站在民族产业的高度上作为民族高科技产业的希望，国家领导人曾多次视察新松公司，高度肯定了企业的发展成就，并寄予殷切期望

新松公司始终认为：优秀的企业可以提供优秀的产品，但具有民族责任感的企业才会有民族骨气和战略眼光，才能成为产业的脊梁

As the national robot industrialization base, SIASUN never forgets its national industry identity each move it takes. As the hope for national high-technology industry, state leaders have visited and inspected SIASUN many times, highly praised the enterprise development and achievements and expressed their earnest expectations. It is SIASUN constant belief that excellent enterprises can produce excellent products. But only those enterprises with a sense of national responsibility can possess national moral integrity and strategic vision, and therefore become the pillar of all industries.



国家主席胡锦涛视察新松公司
Chinese president Hu Jintao visited and inspected SIASUN



国家主席胡锦涛观看新松公司产品
Chinese president Hu Jintao viewed SIASUN products



中央政治局常委李长春视察新松公司
Member of Standing Committee of the Political Bureau
Li Changchun visited and inspected SIASUN



中央政治局常委李克强视察新松公司
Member of Standing Committee of the Political Bureau
Li Keqiang visited and inspected SIASUN



全国人大副委员长、中科院院长路甬祥视察新松公司
Vice chairman of National People's Congress, president of Chinese
Academy of Sciences Lu Yongxiang visited and inspected SIASUN



国务委员陈至立视察新松公司
State Councilor Chen Zhili visited and inspected SIASUN

新松创造的第一

The first places that SIASUN created

中国工业机器人诞生的摇篮
The birthplace of industrial robots in China

中国机器人产业化基地
Industrialization base of robots in China

智能移动机器人的核心竞争力世界领先
World-leading core competence in intelligence mobile robots area

第一家“中国名牌”机器人企业
The first China Top Brand robot enterprise

中国第一批91家创新型企业
One of the first 91 Innovative Enterprises in China

中国机器人第一家上市公司
The first listing robot company in China



企业荣誉

Enterprise Honor



我们的服务
Our Service

为保证产品质量，新松将严格按 ISO9001：2000 质量体系运行。
SIASUN will operate strictly according to ISO9001:2000 Standard, in order to guarantee product quality.

新松配备专业的安装队伍和售后服务队伍，负责 AGV 安装、调试和售后服务，服务热线：024-31699955。
SIASUN has professional installing team and after-sale service team, responsible for AGV installation, debugging and after-sale service. Our service hot line is 024-31699955.

新松 AGV 质保期为壹年，终身维护，因我方设计、制造、运输、安装所出现的质量问题，新松负责免费维修。任何原因发生任何故障，新松接到有效通知后 2 小时内作出电话响应，并提出解决方案或派人上门服务，但因用户原因造成的故障维修，新松只收取成本费用。
The Quality Guarantee Period of SIASUN AGV is one year, with lifelong maintenance service. SIASUN will be responsible for free maintenance, if any quality problem occurs, due to our design, manufacture, delivery, and installation. SIASUN will be responsive over the phone within two hours after receiving valid notice, whatever the problems and the causes are, and will bring forward solutions or send out door-to-door service, during which prime cost will be charged by SIASUN, if the problems are caused by inappropriate use.

在沈阳，新松 AGV 设有备件库，为全方位提供技术支持。为方便用户更好地使用该系统，每个 AGV 工程安装，新松将免费负责对管理和使用操作人员进行技术培训。
SIASUN AGV is equipped with a Spare Parts Storage, which can provide a full-scale technical support. In order for users to better utilize this system, SISAUN will be responsible for providing managing and operating personnel with free technical training.

为保证售后服务响应及时，新松公司已在重庆、潍坊、芜湖设立三个专门的 AGV 售后服务公司，为保证就近服务且及时有效，请与沈阳本部售后部门确认后联系。
SIASUN has set up four expert AGC after-sale service companies in Chongqing, Shanghai, Weifang and Wuhu for timely responsive after-sale service. Please make contact with Shenyang headquarters after-sale service department for confirmation before approaching these companies, so as to ensure timely and valid near-site service.



逾百家尊贵客户

汽车底盘合装行业

- 沈阳华晨金杯汽车有限公司
- 柳州微型汽车厂
- 重庆长安汽车股份有限公司
- 海南汽车投资有限公司
- 上汽集团奇瑞汽车有限公司
- 沈阳中顺汽车有限公司
- 湖南长丰汽车有限公司
- 上汽五菱汽车股份有限公司
- 一汽轿车股份有限公司
- 沈阳通用汽车制造有限公司
- 长安福特汽车有限公司
- 潍柴动力股份有限公司
- 上海通用汽车有限公司
- 保定长城汽车股份有限公司
- 上汽通用五菱汽车股份有限公司
- 上海汽车集团股份有限公司
- 浙江陆虎汽车有限公司
- 上海华普国润汽车有限公司
- 长安福特马自达汽车有限公司
- 浙江金钢汽车有限公司
- 承德威伯输送机械有限公司
- 泰安青年汽车有限公司
- 南汽名爵汽车有限公司
- 海马(郑州)汽车有限公司
- 华泰汽车车身(鄂尔多斯)有限公司
- 杭州青年莲花汽车有限公司
- 天津夏利一汽有限公司
- 吉利汽车慈溪工厂
- 东风风神汽车有限公司
- 北汽福田汽车股份有限公司
- 奇瑞汽车有限公司大连工厂
- 一汽海马汽车有限公司
- 上海华普国润汽车有限公司
- 山西长治汽车零部件公司
- 重庆力帆乘用车有限公司
- 承德天宝机械股份有限公司
- 沈阳华晨金杯汽车有限公司
- 合肥昌河汽车有限责任公司
- 天津一汽夏利汽车股份有限公司
- 风神襄阳汽车有限公司
- 安徽江淮汽车股份有限公司
- 海宁莲花乘用车有限公司
- 奇瑞量子汽车有限公司(中美合资)
- 湖南吉利汽车部件有限公司
- 江铃汽车股份有限公司
-

汽车零部件装配行业

- 西安法士特汽车传动集团公司
- 潍柴动力股份有限公司
- 中国重汽集团大同齿轮有限公司
- 东风变速箱有限公司
- 长春一汽变速箱有限公司
- 东风汽车有限公司
- 宝鸡法士特齿轮有限责任公司
-

烟草行业

- 上海卷烟厂
- 重庆卷烟厂
- 吉林烟草工业有限责任公司
-

电力行业

- 西安西开高压电气股份有限公司
- 华北电网公司北京电力公司
- 重庆电力科学试验研究院
- 泰安供电公司
- 聊城供电公司
- 西安供电局电能计量中心
- 呼和浩特供电局
- 天津市电力公司电能计量中心
- 郑州三晖电气股份有限公司
-

医药、食品行业

- 山东福瑞达药业
- 天津天士力制药股份有限公司
- 内蒙古蒙牛高科乳业有限公司
-

机车高铁行业

- 广州铁路广州动车段检修基地
- 唐山百川智能机器有限公司
- 哈尔滨大功率机车检修基地
- 武汉铁路大功率机车检修基地
- 天津铁路大功率基地
- 上海铁路大功率机车检修基
-

石油化工行业、勘探行业

- 昆明贵研催化剂有限责任公司
- 珠海醋酸纤维有限公司
- 昆明醋酸纤维有限公司
- 广州艺爱丝纤维有限公司
- 广州雅芳制造有限公司
- 上海家化联合股份有限公司
- 大庆石油勘探研究院
-

教育培训行业

- 西安理工大学
- 上海富安工厂自动化有限公司
- 武汉理工大学物流工程学院
- 浙江经济职业技术学院
-

造纸、出版印刷行业

- 辽宁北方出版物配送有限公司
- 上海名毅机械有限公司
- 北京中山浩业机械有限责任公司
- 山东太阳纸业股份有限公司
-

柴油机测试车间输送行业

- 广西玉林柴油机集团
- 大连上柴股份有限公司
- 潍柴动力股份有限公司
- 安徽天动力股份有限公司
- 中国重汽济南动力股份有限公司
-

其他行业

- 中航工业江西洪都航空工业股份有限
- 中国电子科技集团公司第十四研究所
- 沈阳棋盘山国际象棋城
- 太原东杰装备有限公司
- 郑州三晖电气股份有限公司
- 安徽美芝精密制造有限公司
- 太原东杰装备有限公司
-