



J-ELEPHANT PALLET ROBOT SYSTEMS EXPERT

JECEPHANT



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PALLET ROBOT SYSTEM SPECIALIST

J-ELEPHANT

J-Elephant is a robotics company specializing in smart manufacturing and smart warehousing. They provide efficient, flexible and reliable smart logistics solutions for manufacturing customers through their self-developed pallet robots and JMS industrial software.

NATIONAL HIGH-TECH ENTERPRISE



ISO QUALITY MANAGEMENT SYSTEM CERTIFICATE

J-Elephant was incubated by Sinovation Ventures established the AI Institute founded by Dr. Kai-Fu Lee. Since its inception, the company has provided products and services to Fortune 500 companies and leading organizations in a variety of industries, including pharmaceuticals, food, and semiconductors.

40 INVENTION PATENTS

3 PCTS

CE

CE MARKING

SINOVATION VENTURES AI INSTITUTE

○ 创新工场 人工智能工程院 (人) 创新工场

Sinovation Ventures established the AI Institute in September 2016. Dr. Kai-Fu Lee serves as the President, collaborating with renowned engineers and scientists to advance AI in research and business.

J-Elephant Ventures is the second company incubated by Sinovation Ventures' AI Engineering Institute (the first is listed on the Hong Kong stock market).



Dr. Kai-Fu Lee **Sinovation Ventures** Founder



FORKLIFT DEVELOPMENT



FORKLIFT 3.0

INNOVATIVE JE PALLET AMR

SCIENTIFIC

New structure for improved stability of the physical center of gravity.



FORKLIFT

FORKLIFT AGV

The stability of the body The goods mass is not uniform



JE PALLET AMR

The stability of the body The goods mass is better



DEXTERITY Flexibility to efficiently rotate in place.

FORKLIFT

Rotation in place is not supported Excessive rotation radius

INTELLIGENT

The system provides a complete sensing of the surrounding environment and intelligently avoids obstacles.



FORKLIFT About 25% visual blindness



FORKLIFT AGV About 40% visual

blindness



JE PALLET AMR

360-degree detection



The tines of the fork are built-in to prevent any potential safety hazards.



FORKLIFT

External insert fork teeth It has certain security risks



AUTOMATED HANDLING

JE PALLET AMR

By redefining the mechanical structure and incorporating intelligent technology, the forklift AMR breaks away from the inherent form of traditional forklift trucks. This makes it more flexible and efficient, allowing it to adapt to even the most complex scenarios.

SLAM



FORKLIFT AGV



JE PALLET AMR

Support rotation in place The radius of rotation is less than 1.2m



FORKLIFT AGV



JE PALLET AMR

Embedded fork teeth Better security





Built-in pallet AMR

Parameters / models		JE-200U	JE-1200U	JE-1200UH
Underlying parameter	Navigation mode	SLAM	SLAM	SLAM
	Environmental reform	Unnecessary	Unnecessary	Unnecessary
	Maximum running speed	1.2m/s	1.2m/s	1.2m/s
	Band-type brake	Include	Include	Include
	Brake release device	Support	Support	Support
	Maximum load	200kg	1200kg	1200kg
	Size (length, width, height)	1430mm×1005mm ×800mm	1810mm×1480mm ×1000mm	1809mm×1605mm ×1561mm
	Rotate mode and diameter	Rotate in situ, 1800mm	Rotate in situ, 2450mm	Rotate in situ, 2600mm
	Maximum lift height	180mm	180mm	2000mm
	Chassis height	Body chassis is 40mm	Body chassis is 40mm	Body chassis is 40mm
Security related	Emergency stop switch	3	4	4
	Sound warning	Support	Support	Support
	Light warning	Support	Support	Support
	Touch edge collision switch	Support	Support	Support
	Wide outer fork teeth	300mm	600mm	570mm
Fork tooth size	The fork teeth are wide inside	100mm	360mm	330mm
	Fork tooth width	100mm	120mm	120mm
	Fork length	880mm	1220mm	1070mm
	The fork tooth is at the ground height	80mm	75mm	75mm
Wireless performance	WI-FI signal	2.4G / 5G	2.4G / 5G	2.4G / 5G
	WI-FI go on a pleasure trip	Support	Support	Support
Positioning navigation	Positioning accuracy	±10mm	±10mm	±10mm
	Visual repositioning	Apolegamy	Apolegamy	Apolegamy
Expand the interface	USB	3	3	3
	CAN port	Have	Have	Have
	I/ODI port	Route 3 way (NPN)	Route 3 way (NPN)	Route 3 way (NPN)
Cell	Battery voltage	48V-54V	48V-54V	48V-54V
	Battery capacity	48V 30AH	48V 50AH / 48V 100AH	48V 50AH / 48V 100AH
	Battery type	Lithium iron phosphate	Lithium iron phosphate	Lithium iron phosphate
	Charging method	Manual / automatic	Manual / automatic	Manual / automatic
	Battery life	8 Hours	8 Hours / 16 Hours	8 Hours / 16 Hours





Reach lift pallet AMR

Parameters / models		
	Navigation mode	
	Environmental refor	
	Hang	
	Maximum running spe	
Underlying parameter	Band-type brake	
	Maximum load	
	Size (length, width, hei	
	Turning mode	
	Turning radius	
	Maximum lift height (distance fro	
	Emergency stop swit	
	Sound warning	
Safe guarding	Light warning	
	Touch edge collision sv	
	Wide outer fork teet	
	The fork teeth are wide	
Fork tooth size	Fork tooth width	
	Extension	
	The fork tooth is at the grou	
Wireless performance	WI-FI signal	
Wileless performance	WI-FI go on a pleasure	
	Battery voltage	
	Battery capacity	
Battery related	Battery type	
	Charging method	
	Battery life	



	JE-1200E		
	SLAM		
1	Unnecessary		
	Support		
ed	1.5 m/s		
	Include		
	1200kg		
ht)	1380mm×1030mm×245mm (including touch edges)		
	Spin in place		
	830mm		
n the ground)	375mm		
h	2		
	Support		
	Support		
tch	Support		
	642mm (including lift version)		
iside	246mm		
	198mm (including lift version)		
	1220mm		
d height	90mm		
	2.4G / 5G		
rip	Support		
	48V-54V		
	48V 40AH		
	Lithium iron phosphate / ternary lithium		
	Manual / automatic		
	8 Hours		



Stereoscopic Warehouse Pallet AMR

Parameters / models		JE-1200FK-25	JE-1200FK-46	JE-1200FK-65
Underlying parameter	Maximum lift height	2500mm	4600mm	6500mm
	Rated load	1200kg	1200kg	1200kg
	Navigation mode	QR code navigation	QR code navigation	QR code navigation
	Maximum running speed	1.2m/s	1.2m/s	1.2m/s
	conduct oneself with dignity	1500kg	1910kg	3000kg
	Size (length, width, height)	1867mm×1000mm ×1925mm	1867mm×1150mm ×2955mm	2000mm×1230mm ×2990mm
	Minimum turning radius	934mm	934mm	1000mm
	Emergency stop switch	4	4	4
Security related	Sound warning	Support	Support	Support
	Light warning	Support	Support	Support
	Touch edge collision switch	Support	Support	Support
	Wide outer fork teeth	570mm (customizable)	570mm (customizable)	570mm (customizable)
	The fork teeth are wide inside	326mm (customizable)	330mm (customizable)	330mm (customizable)
Fork tooth size	Fork tooth width	122mm	122mm	122mm
	Fork length	1070mm / 920mm	1070mm / 920mm	1070mm / 920mm
Wireless performance	WI-FI signal	2.4G / 5G	2.4G / 5G	2.4G / 5G
	WI-FI go on a pleasure trip	Support	Support	Support
Positioning navigation	Positioning accuracy	±10mm	±10mm	±10mm
	Lift accuracy	±5mm	±5mm	±5mm
Battery related	Battery capacity	48V 100AH	48V 100AH	48V 160AH
	Battery type	Lithium iron phosphate	Lithium iron phosphate	Lithium iron phosphate
	Charging method	Manual / automatic	Manual / automatic	Manual / automatic
	Battery life	About 10 hours	About 8 hours	About 8 hours
Environmental requirements	Operating ambient temperature	0~45°C	0~45°C	0~45°C
	Lanway width (beam shelf)	2100mm	2100mm	2200mm
	Roadway width (through the shelf)	≥1200mm	≥1300mm	≥1400mm





JE ROBOT MANAGEMENT SYSTEM (JMS)

JMS is an intelligent digital platform developed by J-Elephant for industrial use. Its purpose is to create an end-to-end solution for storage, handling, and other scenarios using robots as a carrier. The platform integrates intelligent algorithms and provides standard interfaces to connect with customers' ERP, WMS, or MES systems. This creates an integrated, intelligent, and highly reliable closed-loop digital platform. It can also offer standard interfaces to customers' ERP, WMS, or MES systems, creating an integrated, intelligent, and highly reliable closed-loop digital platform to enhance customers' automation, digitization, and intellectualization processes.

The JMS platform comprises the JWMS warehouse management system, JFS scheduling system, and JRS robot system. It facilitates customer business process control, cluster robot scheduling, and robot intelligent control. The platform connects robots with business systems at all levels, enabling unmanned and efficient storage and handling of pallets throughout the process.







FULL SCENE INTELLIGENT LOGISTICS SOLUTION

Focus on pallets "plane handling + three-dimensional storage"

MA RIALS HANDLING

01 PLANE HANDLING

PRODUCTION LINE HAN-DLING

02

STEREOSCOPIC STORAGE

03 STACKING HANDLING

捷象灵越 -ELEPHANT

STACKING HANDLING

LINE HANDLING

DENSE STORAGE



16

CASE

Case introduction **NEW INTELLIGENT STEREOSCOPIC** Pallet AMRJE-1200FK, breaks through the tradi-WAREHOUSE FOR A CHINESE MEDICINE tional automated Stereoscopic Warehouse **ENTERPRISE** system construction and operation mode, the construction of unmanned forklift based on the •Conveyor line docking seven-deep position through the rack vertical ·Finished products off the line warehouse. ·Pallet replenishment VALUE CREATION INFRASTRUCTURE INCREASE STORAGE REDUCE CAPACITY RATES ERROR RATES INCREASE 80% 6 AUTOMATION 6%





Case introduction

Case introduction

In order to meet the demand for production line automation and improve the overall level of intelligence, this manufacturer needs to complete the automation upgrading project of package material warehousing and finished product launching. JE-1200U forklift robots are used to work together with palletizers through JMS system to complete the work of empty pallet recycling, finished product unloading, finished product warehousing and delivery.

FULL PROCESS AUTOMATION



Case introduction

The client company's business scale is expanding, and in order to meet the market demand for the output and variety of infusion drugs, the existing production line was expanded and the production logistics system was upgraded and remodeled.



PRODUCTION BEAT

CASE _____

INTELLIGENT HANDLING SYSTEM FOR LINE-SIDE LOGISTICS IN FORTUNE 500 FOOD FACTORIES.

·Stacking/unstacking Automatic material transportation Package and finished product caching

Case introduction

In order to improve efficiency and quickly respond to production rhythms, the world's top 500 food factory has implemented an intelligent handling system.

The JE-1200UH deployed in the project features pallet identification, handling and depalletization; the JMS system automates the delivery of raw materials within the plant by opening up docking, caching and depalletizing areas.



BENCHMARKING A GLOBAL BEVERAGE GROUP: AUTOMATED PRODUCTION LINE LOGISTICS SYSTEM

·Stacking/unstacking •Automatic and finished product caching Compact Storage VALUE CREATION SUBSTITUTE GROUP FOR HUMAN BENCHMARKING LABOR CASE

Case introduction Case introduction **INTELLIGENT HANDLING SYSTEM FOR A** At the Beijing plant of a Fortune 500 food compa-**DOMESTIC IC EQUIPMENT ENTERPRISE** ny, where the flow and management of finished goods and packaging materials was largely manual, the deployment of the JE-1200E and Safe handling million yuan. JMS system automated and digitized the produc-Docking of elevator facilities tion line's raw material inbound, outbound, and finished goods inbound. VALUE CREATION VALUE CREATION

LABOR SAVINGS PER SHIFT

CROSS-FLOORS

INTELLIGENT HANDLING SYSTEM FOR FINISHED PRODUCTS AND PACKAGING **MATERIALS IN A FORTUNE 500 FOOD** FACTORY

·Raw material warehouse handling ·Finished goods handling Inbound and outbound management ·Multi-Robot Scheduling

LABOR SAVINGS PER SHIFT 2-5

SUBSTITUTE FOR HUMAN LABOR

CONTINUOUS **OPERATION**

Case introduction



Case introduction

The plant aims to improve production efficiency by implementing a more flexible, intelligent and efficient logistics system. By deploying multiple JE-1200UHs and an accompanying wireless network system, fully automated handling of packaging materials from the outdoor unloading area to the indoor stacking area as well as finished products from the production line to the finished product stacking area is realized. This

project has become the group's first online logistics robot benchmark case in the world.

CONTINUOUS **OPERATION**



The customer's production process involves the handling of semiconductor process equipment, which weighs 1 ton per unit and is valued at 3

The JE-1200U is used to automate the handling of process equipment from the third floor to the first floor. In the customer's Phase II project, JE-1200U can automatically adjust fork tines to ensure safe handling of most process equipment.



SERVICE

SERVICE PROCESS

FEASIBILITY STUDY

02

ENQUIRY COMMUNICATION

01

SERVICE **GUARANTEE**

04

IMPLEMENTATION

DEPLOYMENT

AFTER-SALE SERVICE







24-HOUR REMOTE SERVICE

RAPID FAULT RESPONSE AND REPAIR





TECHNICAL TRAINING



0_0



03

RAM DEVELOPMENT

PROFESSIONAL AND EFFICIENT TEAM







TESTING AND TRAINING

ONE-STOP SOLUTION

TIMELY AND EFFICIENT 1:1 **RESPONSE CAPABILITY**