Industrial AI 3D Machine Vision
Hardware & Software Products
Total Solutions

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HANCHINE

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HANCHIE

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3D

Vision to Think. Intelligence to Act



COMPANY PROFILE

Zhejiang Hanchine AI Technology Co, Ltd.(HANCHINE) (HANCHINE) is a high-tech enterprise specializing in artificial intelligence and 3D machine vision technologies. It provides hardware and software products as well as total solutions for 2D/3D vision inspection, measurement, positioning, and robotic random bin picking.

Founded in 2017 by a PhD team from Zhejiang University, the company has an R&D team of over 30 members, with more than 70% holding master's or doctoral degrees. Its 3D cameras, random bin picking systems, and 2D/3D fusion solutions have been mass-applied in industries including general semiconductors, 3C electronics, plastics and chemicals, and bearings.

Headquartered in Hangzhou, the company has a complete R&D and manufacturing system, certified with ISO9001:2015, and owns more than 40 domestic and international patents. Based on self-developed algorithms and AI technologies, it has launched multiple innovative solutions in robotic grasping, depalletizing & palletizing, and high-precision appearance inspection.

30%+
R&D Team

70%+
Postgraduates (Master/PhD)

40+
Patents

CORE ADVANTAGES

Self-developed Software

- Full-stack self-developed underlying vision algorithms
- Deeply integrated 2D & 3D vision inspection
- Industry-specific self-developed AI models

Self-developed hardware

- Proprietary brand serialized industrial-grade 3D cameras
- Adaptable to full scenarios of industrial inspection,measurement,and recognition

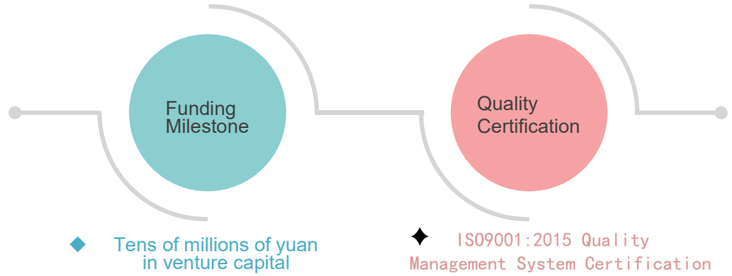
R&D team

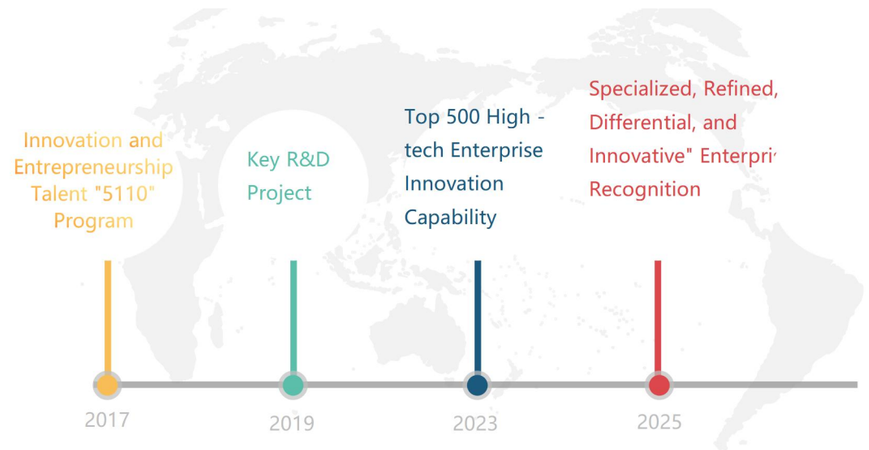
- Core technical team with master/doctor degrees mainly from Zhejiang University
- 30+ R&D team

Patented Technology

- Over 40 patents obtained (including 13 invention patents)
- Hosted provincial/municipal key R&D projects

DEVELOPMENT HISTORY



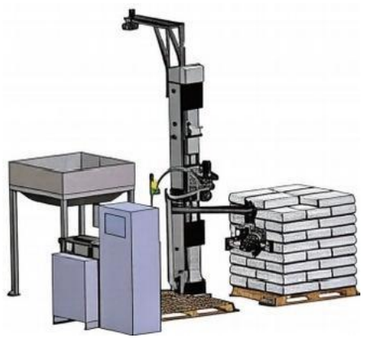


ROBOT PALLETIZING WORKSTATION

Robot Depalletizing & Bag Opening Workstation

Depalletizing technology based on 3D vision emerges with high cost performance. It can accurately identify and grasp various soft bags, gunny bags and other goods, effectively handle complex conditions such as deformation and wrinkling, and features strong pallet compatibility supporting oversized pallets. It greatly improves production efficiency, reduces labor costs and error rates, showing excellent scene adaptability and flexibility.

Soft Bag De-palletizing, Opening & Feeding Series



Lite Series Lite

3T/ h



Max Series Max

3.5-4T/h



Pro Series Pro

6-8T/h



Mobi Series Mobi

Multi-feed port, movable

ROI Analysis 3 Tons/Hour Solution

Core Benefits: Accurate robotic bag opening greatly reduces leftover materials and raw material loss, achieving direct cost savings.

Unit Saving:

Manual feeding:
~10g material spillage and residue per bag (25kg)

Robotic feeding
material loss reduced to ~2g per bag (25kg)

Unit Saving:

Equivalent to reducing 8g of waste per bag of raw material processed.



Annual Savings Calculation

Factory: Scale

Taking a production line with an annual raw material processing capacity of 30,000 tons as an example.

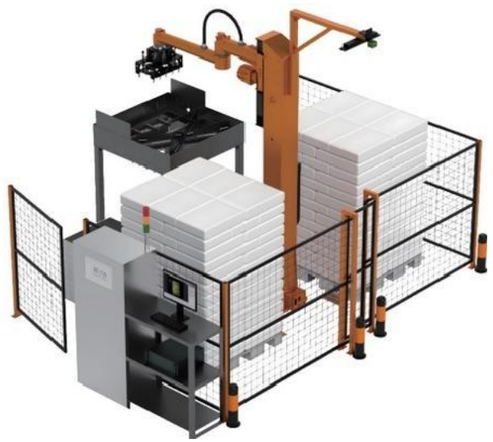
Annual Number of Bags:

30,000 tons ÷ 0.025 tons/bag = 1,200,000 bags/year.

Annual Waste Reduction:

8g/bag × 1,200,000 bags = 9,600,000g = **9.6 tons/year.**

Lite Series



◎Technical Parameters

Material	Type	Granular/Powder	Customizable solutions available
	Bag Material	PE/Woven Bag/Kraft Bag	
	Weight	25kg/50kg	
	Package Size/Pallet Size(mm)	660*40*150&110*1300	
	Pallet Height	≤2.1m	
Function	Speed	120 bags/h	
	Gripper Type	Needle	
	Loading/Unloading Stations	Single/Multi-station	
	Residue/Empty Bag Handling	6g/bag, bag frame	
Installation	Space Height	Min. 4m	
	Dimensions (LWH)	3.8m*5m*5m (360° operation)	
Robot	Column 4-axis/Weight	Column 4-axis/700kg	
	Max Load/Radius	100KG/2200mm	
	Repeat Accuracy/Power	±0.5mm/5.75KVA	
	Axis Movement	Axis 1 ±130°, Axis 2 2200mm, Axis 3 ±140°, Axis 4 ±360	
	Temp/Humidity	20–50°C (non-condensing), vibration <4.9m/s²	

Application Case Plastic Sheet Manufacturing

Project Background:

PE sheet production capacity: 20 tons/day. Manual feeding involves high temperature, heavy workload, and difficulty in recruitment, affecting production stability.

Core Challenges:

Space solidification in old factories; traditional equipment is hard to install. Requires a space - saving, moderately efficient, and cost - effective solution.

Solution:

Lire Series Unbagging Robot

- ➢ Single - station + unbagging port occupies only 3m×3m
- ➢ Processing capacity: 3 tons/hour
- ➢ Standardized product with short cycle

Application Value

- ➢ Break through space and labor bottlenecks
- ➢ Build a compact, economical and efficient solution
- ➢ Establish a benchmark for intelligent upgrading



Max Series



◎Technical Parameters

Material	Materials	PP/PE/PVC/garlic/flour/rice, etc.	Customizable solutions available
	Type	Granular/Powder	
	Bag Material	PE/Woven Bag/Kraft Bag	
	Weight	25kg/50kg	
	Package Size (mm)	660*440*150	
	Pallet Size (mm)	1100*1300	
	Pallet Height	≤2.1m	
Function	Speed	160 bags/hour	
	Residue	6g/bag	
	Gripper Type	Needle/Sucker	
	Loading/Unloading Stations	Single/Multi-station	
	Empty Bag Handling	bag frame	
Installation	Space Height	Min. 4m	
	Dimensions (LWH)	3.6m*6.5m*6.5m(300° operation)	
Robot	6-axis/Weight	6-axis/1120kg	
	Max Load/Radius	100KG/3200mm	
	Optional Brands	ESTUN,YASKAWA,ABB,KUKA，etc.	

Application Case Cable Industry

Project Background

Taimai Base (a leading cable enterprise) has an annual input of 70,000 tons of PE material. It already has unmanned forklifts and a centralized feeding system. A smart unbagging unit is needed to achieve fully unmanned docking.

Core Challenges

Need to coordinate with MES and unmanned forklifts. Real - time traceability of data (batch, weight, time) is required.

Solution

MAX Series Unbagging Robot

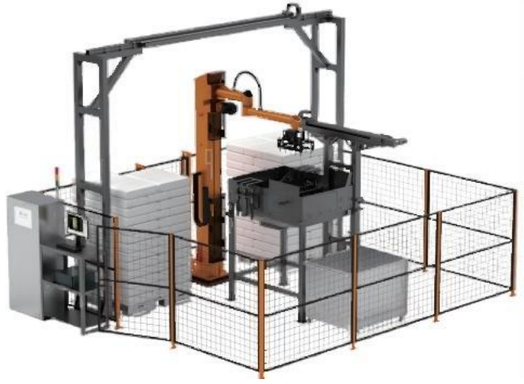
- ➢ Supports multi - protocol access to workshop networks
- ➢ Ensure production line runs in sync with beats
- ➢ Automatically record and upload data to MES

Application Value

- ➢ Bridge the "last mile" from warehousing to production lines
- ➢ Achieve dual - closed loop of data and logistics
- ➢ Lock in key nodes of smart factories



Pro Series(High Performance)



◎Technical Parameters

Material	Materials	PP/PE/PVC/sugar/flour/rice, etc.	Customizable solutions available
	Type	Granular/Powder	
	Bag Material	PE/Woven Bag/Kraft Bag	
	Weight	25kg/50kg	
	Package Size (mm)	660*440*150	
	Pallet Size (mm)	1100*1300	
	Pallet Height	≤2.1m	
Function	Speed	axis:240 bags/h; 6-axis:320 bags/h	
	Residue	Single/Multi-station	
	Loading/Unloading Stations	Single/Multi-station	
	Receiving Equipment	Mixer/Reactor/Feeding System	
	Empty Bag Handling	Waste bag rack	
Robot	Column 4-axis / 6-axis		

Application Case

Film Industry

Project Background:
Film leader with 150 tons PP daily feeding; high labor intensity, insufficient peak capacity.

Core Challenges:
Old equipment (4 tons/h) cannot meet production; needs small footprint + high efficiency.

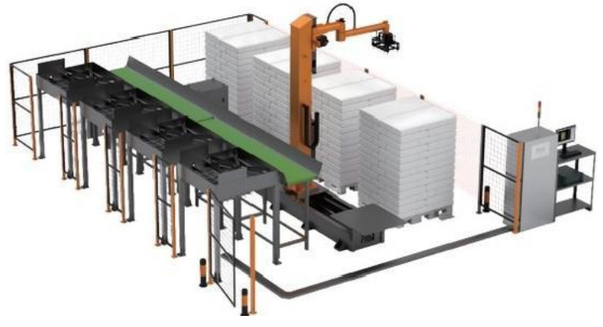
Solution:
Pro Series high-speed robot; 8 tons/h capacity.

Application Value

- Achieves compact space + high output.
- solves high-throughput & space constraints.



Mobi Series



◎Technical Parameters

Material	Materials	PP/PE/PVC/sugar/flour/rice, etc.	Customizable solutions available
	Type	Granular/Powder	
	Bag Material	PE/Woven Bag/Kraft Bag	
	Weight	25kg/50kg	
	Package Size (mm)	660*440*150	
	Pallet Size (mm)	1100*1300	
	Pallet Height	≤2.1m	
Function	Residue	6g/bag	
	Loading/Unloading Stations	Multi-station	
	Receiving Equipment	Mixer/Reactor/Feeding System	
	Dust Removal	As per customer demand	
	Empty Bag Handling	Waste bag cabinet	
Robot	Column 4-axis / 6-axis		

Application Case

Modified Plastics

Project Background:
Modified plastics enterprise with 40 tons daily feeding; multi-variety, small batch, frequent changeovers.

Challenge:
Fixed-outlet robots cannot handle frequent switching; needs precise formula-based distribution.

Solution:
Mobi Series with 7th axis rail; “one robot for multiple outlets”.

Application Value

- Enables flexible changeovershandles
- Multi-variety production; improves
- line flexibility.

