SUSTAINABLE DEVELOPMENT GROUP

SHARE WELL

HIGH SPEED IRREGULAR SHAPE PLUG-IN MACHINE

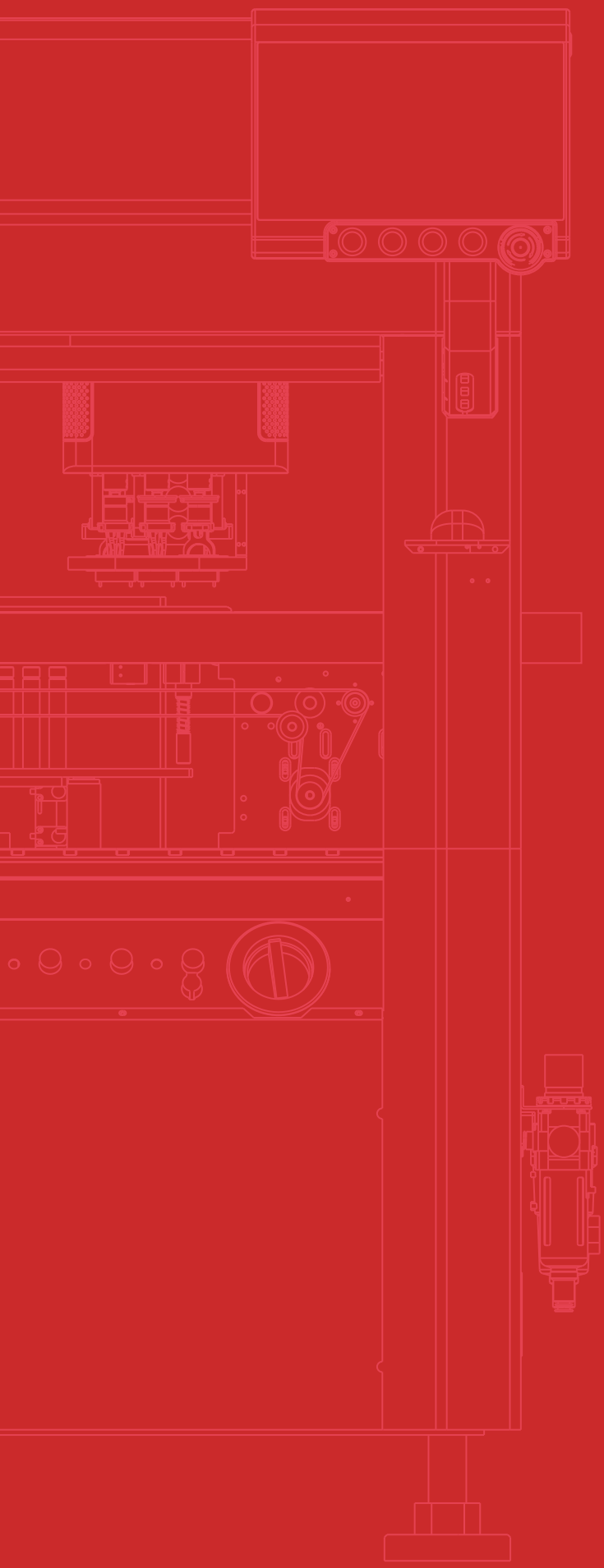
Product Manual



SUZHOU SHARE WELL AUTOMATION TECHNOLOGY CO., LTD.

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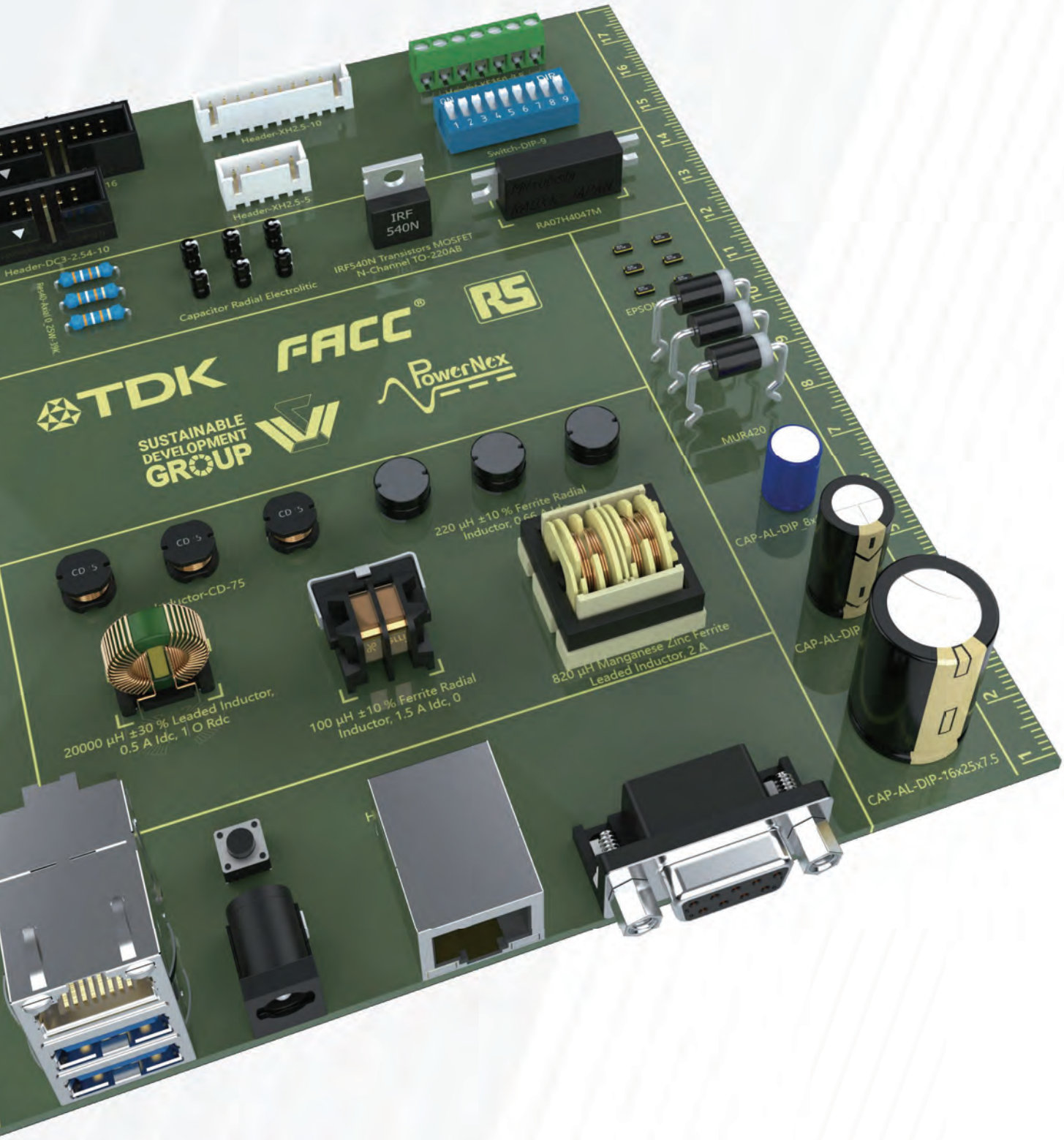
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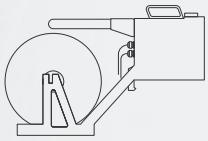
PowerNex

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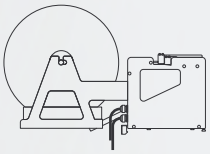
Achieve 98% Through-Hole Components



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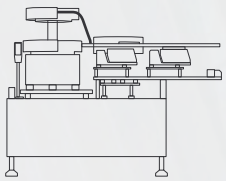
Vertical Tape Feeder



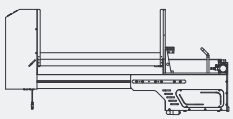
Horizontal Tape Feeder

 Diode	 Fuse	 Metal Film Resistor	 Safety Capacitor	 Thermistor
 Electrolytic Capacitor	 Magnetic Coil	 Triode	 PPN Capacitor	 Varistor
 Light Emitting Diode	 MKP Capacitor	 Resistor	 Inductor	 Jumper Wire

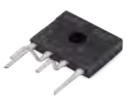
 4-Pin Header	 19-Pin Socket	 Potentiometer	 Toggle Switch	 Audio Port
 Power Port	 Tact Switch	 Inductor	 S-Video	 Square Capacitor
 9-Pin Array Resistor	 Fuse	 5-Pin Socket	 10-Pin Socket	 7-Pin Socket



Vibratory Bowl Feeder



Tubular Feeder

 Bridge Rectifier	 Triode	 Bridge Rectifier	 Optocoupler	 IC
 Network Transformer	Network Transformer	PTC Resistor	Fan Capacitor	Relay
Relay	Relay	Relay	Relay	Relay

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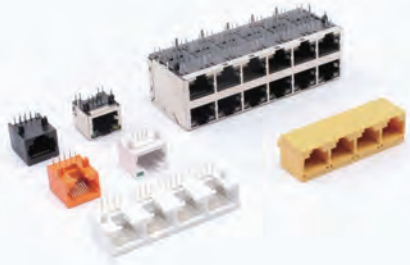
Common Motherboard Ports ▶



◀ USB Port



RJ45 Port ▶



Large Multi-Pin Connector ▶



◀ S-Video Module



Automotive Electronic Connector ▶



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Inductor/Choke Coil ▶



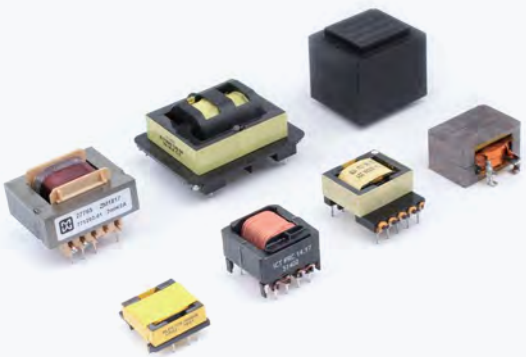
◀ Electrolytic Capacitor



Relay/Film Capacitor ▶



Transformer ▶



◀ Integrated Circuit



Communication
Industry Connector ▶



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680 superfast

High Speed Irregular Shape Plug-in Machine

Faster, Smaller, More Flexible Universal High Speed Irregular Shape Plug-in Machine

Three Cameras | Simultaneous Capture | Compact Size | Space-saving



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680 superfast

High Speed Irregular Shape Plug-in Machine

Solution for Irregular Shape Insertion Machine, from Small Batch Multivariable to Large Batch Production

680 Superfast integrates the visual, motion control, and deep learning algorithms as its core components. Its performance, precision, flexibility, and compatibility have reached industry-leading levels, capable of meeting your production needs from small-batch, multi-variety to large-scale production.

5300	0.68	± 0.02	≥ 1.33
Cycles per Hour (Cph)	Placement Maximum Speed (S/C)	Repeat Positioning Accuracy (mm)	Process Capability Index (CPK)

※ Test results under specified conditions of our company.

Insert Anomaly Detection (Standard)

Insert Pressure Detection (Optional)

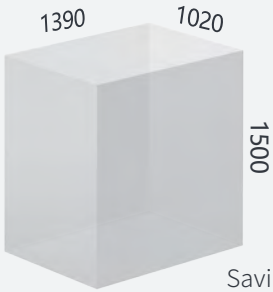
Component Height Detection (Optional)



SmartAI SIX Gantry Head

Integrated Light Source | Servo-driven | 6 Working Heads

Compact Design
Maximizes Space Utilization



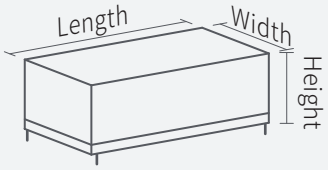
> 30%

Unit: **mm**

Saving More Space Compared to Similar Products

Material Specification

Length	Height
2-30mm	**2-30mm**
Width	Weight
1-20mm	**300g Max**

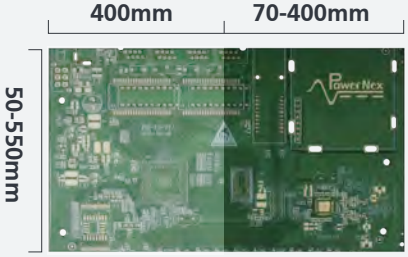


PCB Specification

Thickness
1-3mm

Weight
5kg Max

Secondary Pressing of PCB

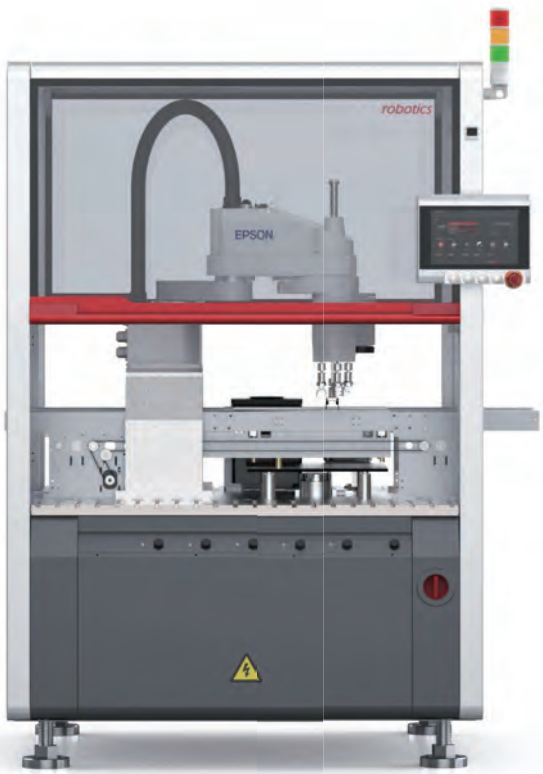


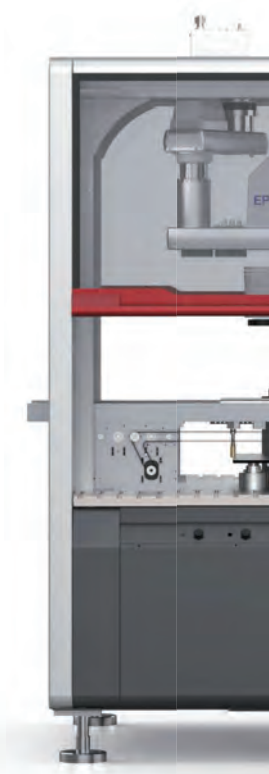
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Robotics

Robotic Irregular Shape Plug-in Machine

The **Robotics** series uses industrial robots as the core components, integrating gull-wing doors, integrated work heads, machine vision, and other key technologies. Its features include high flexibility and versatility, making it suitable for inserting odd-shaped and large components.





1200 *Robotic Irregular Shape Plug-in Machine* robotics

Integrated Seated Robot | Achieve High Cost-Effectiveness

4/6	2.0	±0.03
Work Head (pcs)	Placement Maximum Speed (S/C)	Accuracy(mm)

1600

Integrated Hoisting Robot |

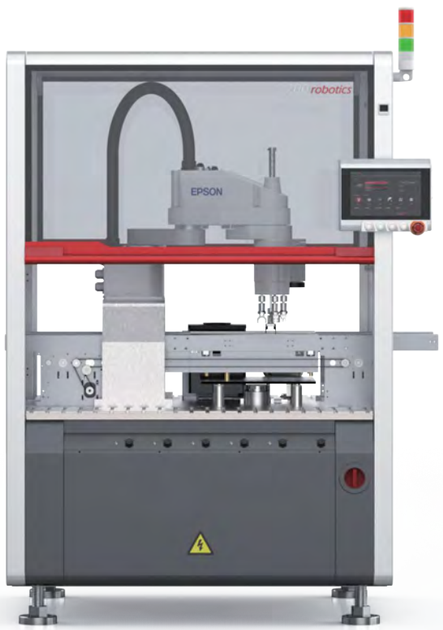
4	1.8
Work Head (pcs)	Placement Maximum S (S/C)

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Robotics

Robotic Irregular Shape Plug-in Machine

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1200 *Robotic Irregular Shape Plug-in Machine* robotics

Integrated Seated Robot | Achieve High Cost-Effectiveness

4/6	2.0	±0.03
Work Head (pcs)	Placement Maximum Speed (S/C)	Accuracy(mm)



1600 *Robotic Irregular Shape Plug-in Machine* robotics

Integrated Hoisting Robot | Achieve Wide Working Range

4	1.8	±0.03
Work Head (pcs)	Placement Maximum Speed (S/C)	Accuracy(mm)



1800 *Robotic Irregular Shape Plug-in Machine* robotics

Integrated Six-Axis Robot | Achieve Multi-Angle Insertion

4/6	2.2	±0.04
Work Head (pcs)	Placement Maximum Speed (S/C)	Accuracy(mm)

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Compatibility

The future development trend of
integrate top-brand robots to achi
bility, and high quality, thereby r
and increasing the investment valu

PCB Board Size

50-400*70-400mm

Compatible with Large Components

Length **2-50mm** Height **2-60mm**

Width **2-50mm** Weight **500g**



Highly Flexible Chuck

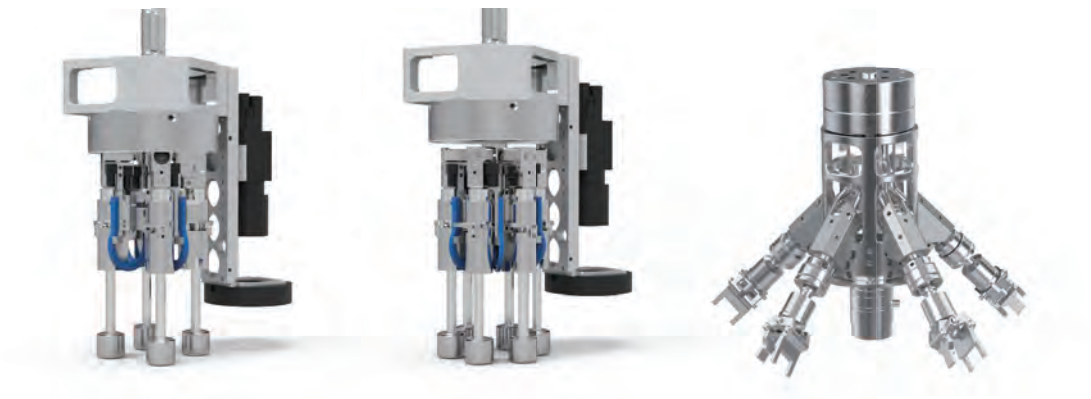
Integrated Vacuum Suction Head



Perfect integration

ABB KUKA EPSON

Three Types of Work Heads



4-Axis 4-Head—Work Head

4-Axis 6-Head—Work Head

6-Axis 4-Head—Work Head

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'robots replacing humans' is to
eve high flexibility, high compati-
educing equipment failure rates
ue of equipment.



with major brand robots!

YASKAWA FANUC

Flexibility

Miniaturized, Space-saving

1250*1200*1800mm

iVT Vision System

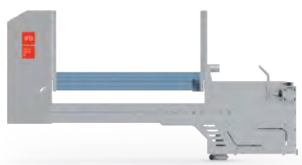
Visual algorithm designed for odd-shaped inserts, capable of precisely detecting and positioning the quality of component pins, appearance contours, and coordinate positions

Forming/Shaping Device, can be equipped on all feeders

An experienced process development team focused on developing forming/shaping devices for components, which can significantly reduce incoming material requirements, enhance equipment versatility and compatibility, while also ensuring and improving component insertion rates.

Modular design concept Enables flexible configuration

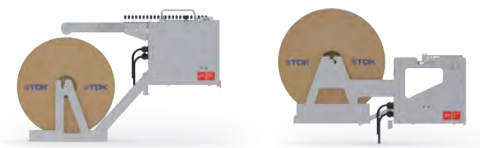
16 PCS
Tubular Feeder
(Tube-Fed Materials)



16 PCS
Vibratory Bowl Feeder
(Bulk Material)



16 PCS
Tape Feeder
(Vertical/Horizontal)



4 PCS
Tray Feeder
(Tray-Fed Material)



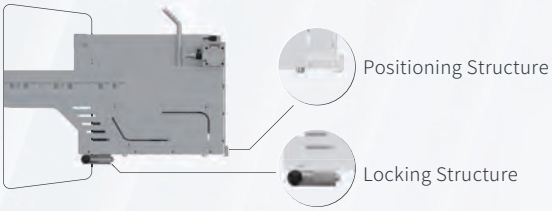
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Host and feeding device

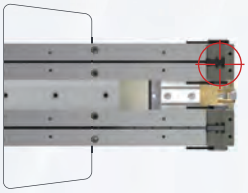
Modular design concept
Enables flexible configuration

Dual-sidedfeeding,rational layout, enabling flexible configuration and quick replacement

2 min
Quick Replacement



30s
Quick Positioning





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16 PCS
Tape Feeder
(Vertical/Horizontal)

16 PCS
Vibratory Bowl Feeder
(Bulk Material)

16 PCS
Tubular Feeder
(Tube-Fed Material)

4 PCS
Tray Feeder
(Tray-Fed Material)



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iFD™ Feeding Device
Modular Design Independent Control

An independent feeder development team can provide a variety of feeding solutions based on different material handling methods. Additionally, they can also flexibly configure according to production needs to meet the continuous feeding of pin components and irregular components.



+ ZDF series

Vibratory Bowl Feeder

Bulk Material Feeding



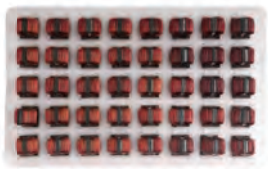
0.5s	30min		
Feeding Speed	Continuous Feeding	Forming Function	Shaping Function



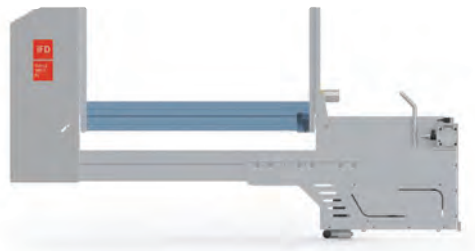
+ TRF series

Tray Feeder

Tray-Fed Material



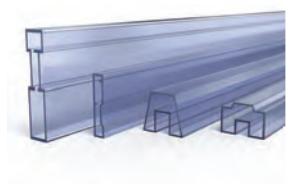
0.8s	20盘		
Feeding Speed	Maximum Capacity	Forming Function	Shaping Function



+ TUF series

Tubular Feeder

Tube-Fed Material



0.6s	20管		
Feeding Speed	Maximum Capacity	Forming Function	Shaping Function

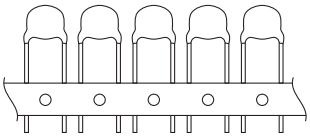
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+ TDF-VT series

Vertical Tape Feeder

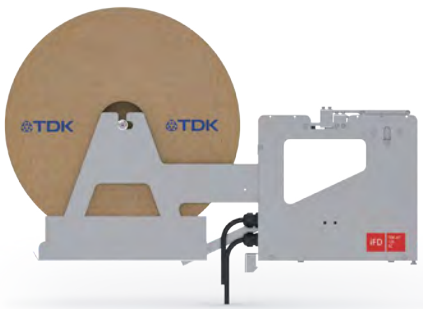
Compatible with Reel/Box-Fed Material



0.8s
Feeding Speed

Forming Function

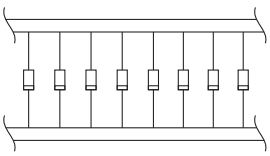
Shaping Function



+ TDF-HT series

Horizontal Tape Feeder

Compatible with Reel/Box-Fed Material



0.8s
Feeding Speed

Forming Function

Shaping Function



+ TSF series

Special Customized Feeder

Customized services provided based on material feeding methods or component characteristics



Electrolytic Capacitor Components



Tuning Knob



Connector

※ The left image shows a horizontal capacitor feeder developed for the power supply industry.

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All feeders can be equipped with shaping/forming devices.

An experienced process development team specializing in the development of component reshaping/-forming devices can significantly reduce incoming material requirements, enhance equipment versatility and compatibility, while also ensuring and improving component insertion rates.



For special components, we offer customized services, striving to turn the impossible into possible!

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All feeders can be equipped with shaping/forming devices.

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Horizontal Tape Feeder with
Integrated Processing and Forming

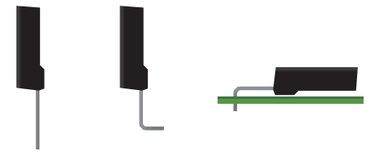
For special components, we offer customized services,
striving to turn the impossible into possible!

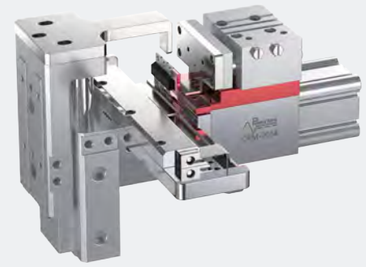


Safety Capacitor Shaping



Rectifier Bridge Shaping





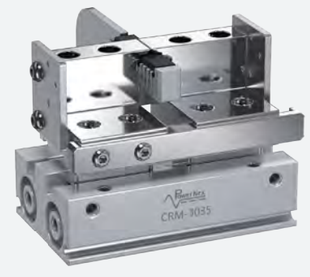


Coreless Inductor Shaping

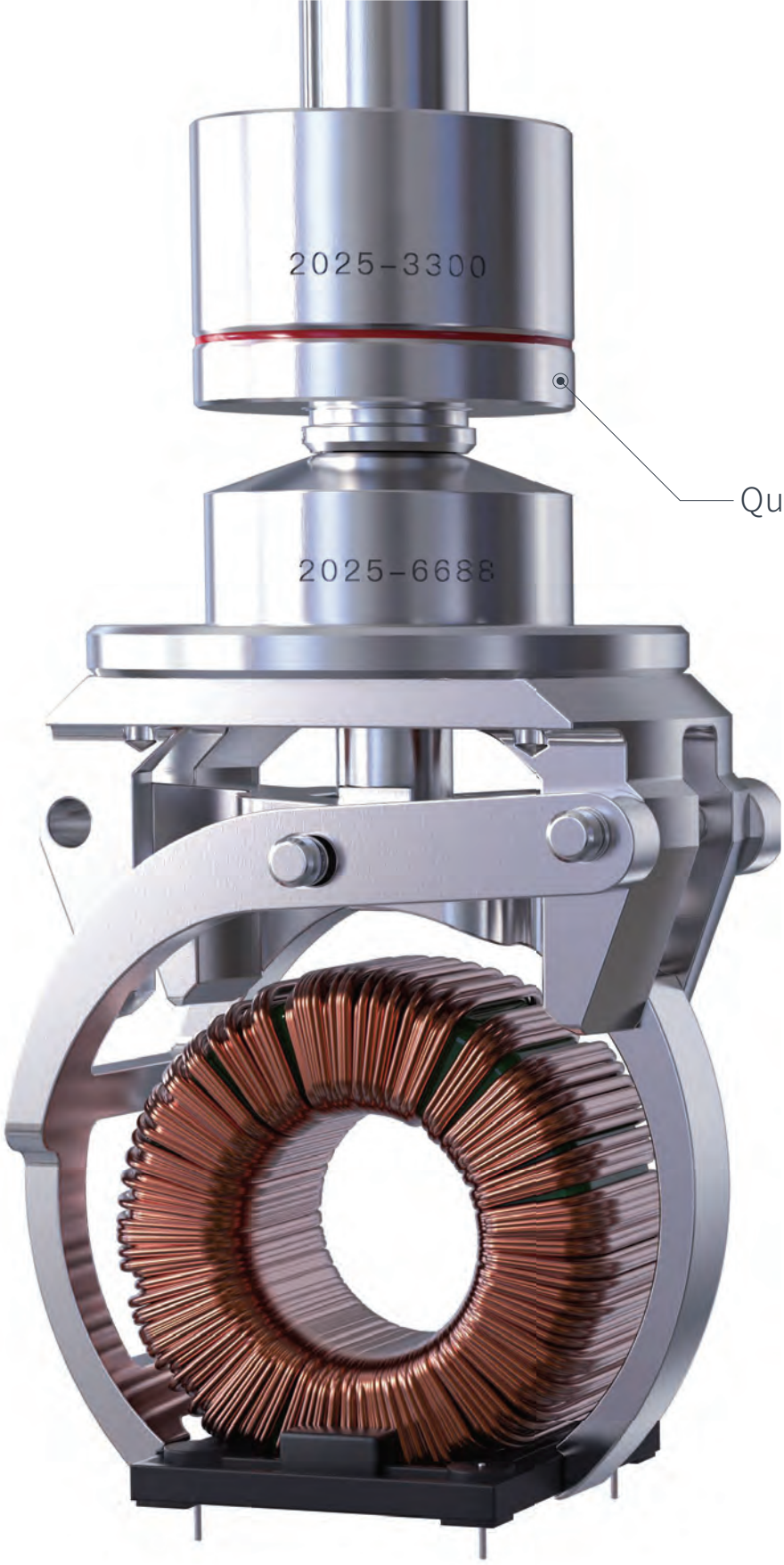


IC Shaping





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Air Conditioner Mainboard Common Mode Inductor Custom Gripper

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A wide range of pick-up devices providing customized services

With over 500 types of nozzles and grippers to choose from, capable of picking up connectors, relays, transformers, and various other irregular components. For special components, our experienced R&D team offers customized services.



Self-Developed Patented Products

Highly Flexible Quick Chuck

Interchangeable Chuck | High Clamping Force | High Quality | Long Lifespan

Innovative Design Patented Products

Integrated Vacuum Suction Head

Interchangeable Suction Head | High Suction Power | High Quality | Long Lifespan



Pick-up Method



Suction



External Clamping



Internal Clamping

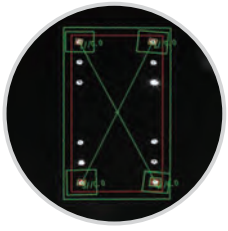


Special Customization

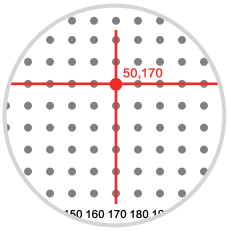
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Image Capture Effect



PIN Quality Inspection



PIN Position Coordinates

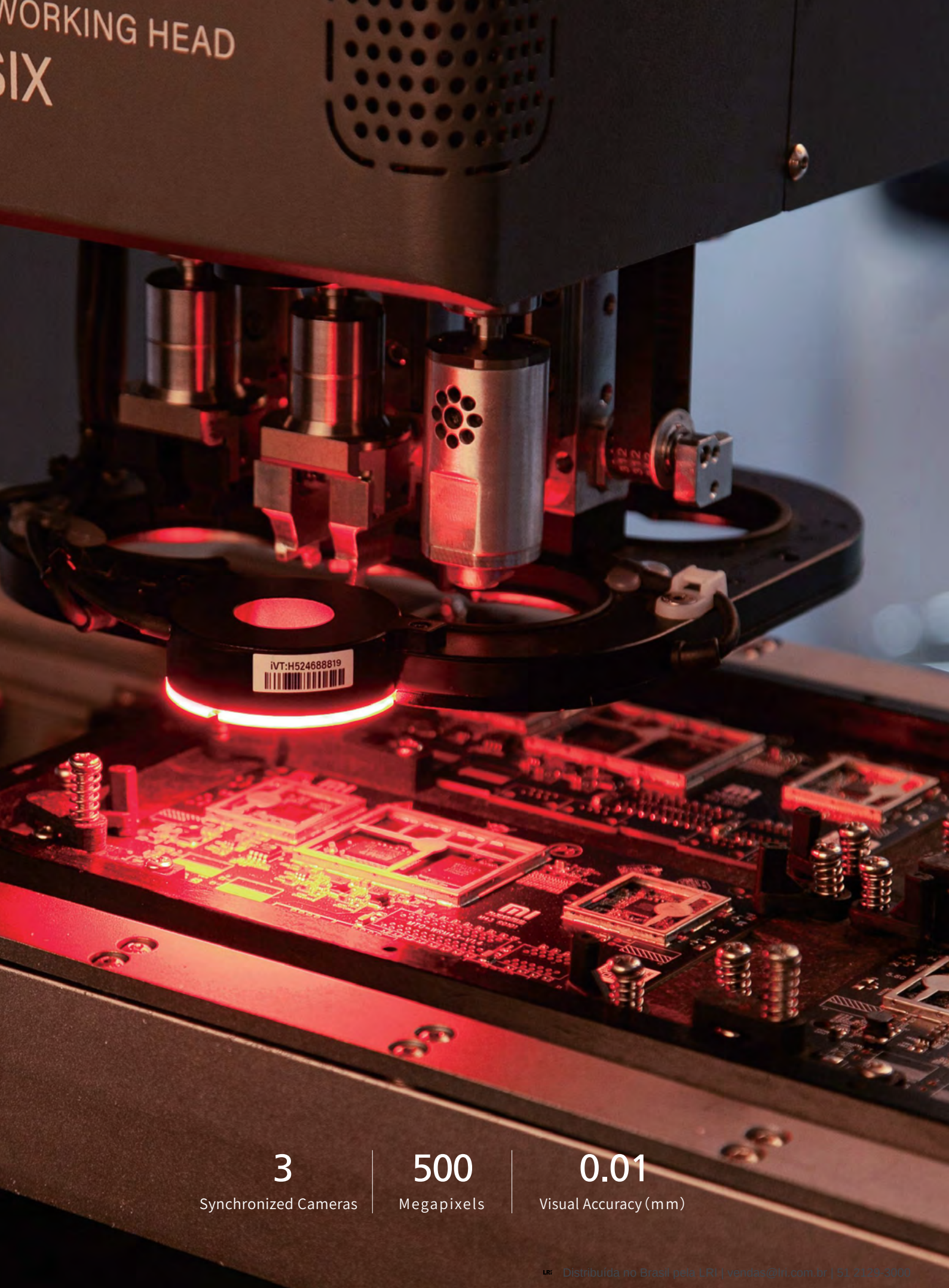


Unique Visual Algorithm

High-Speed Photography Advanced Visual Algorithm

The iVT™ 3.0 vision system is designed for irregular components. Its unique vision algorithm can accurately inspect and locate the quality, appearance contour, and position coordinates of component pins.

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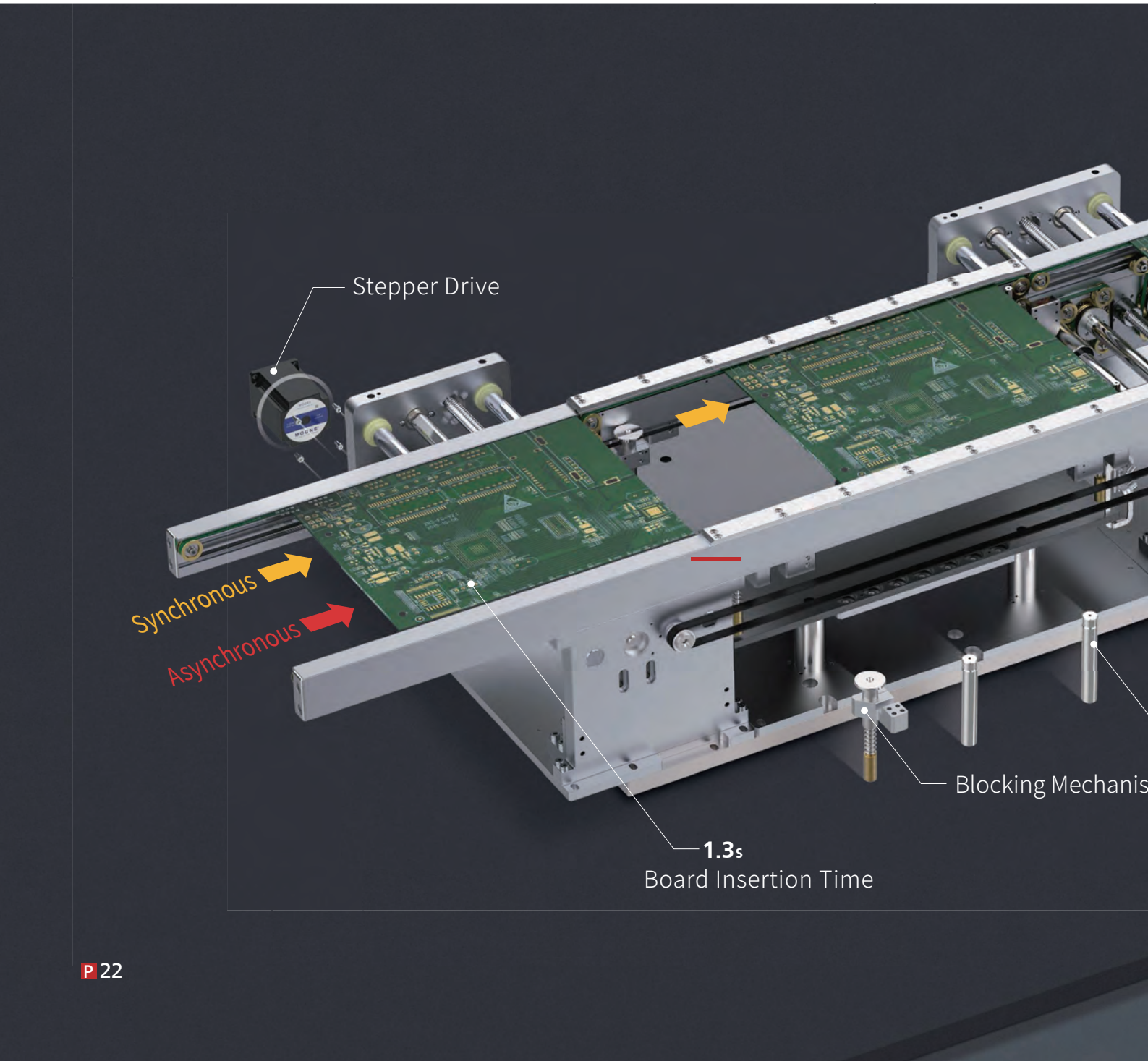


3	500	0.01
Synchronized Cameras	Megapixels	Visual Accuracy (mm)

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PCB Transmission Device
Fully CNC Controlled

The three-section track features a modular design and is controlled by fully numerical control technology, enabling synchronous/asynchronous PCB board transfer, ensuring fast, stable, and precise positioning.



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PCB Transmission Device
Fully CNC Controlled

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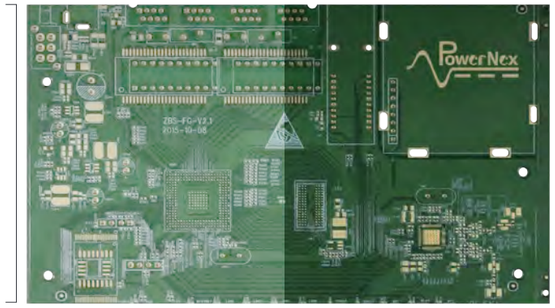
Thickness
1-3mm

Weight
Max **5kg**

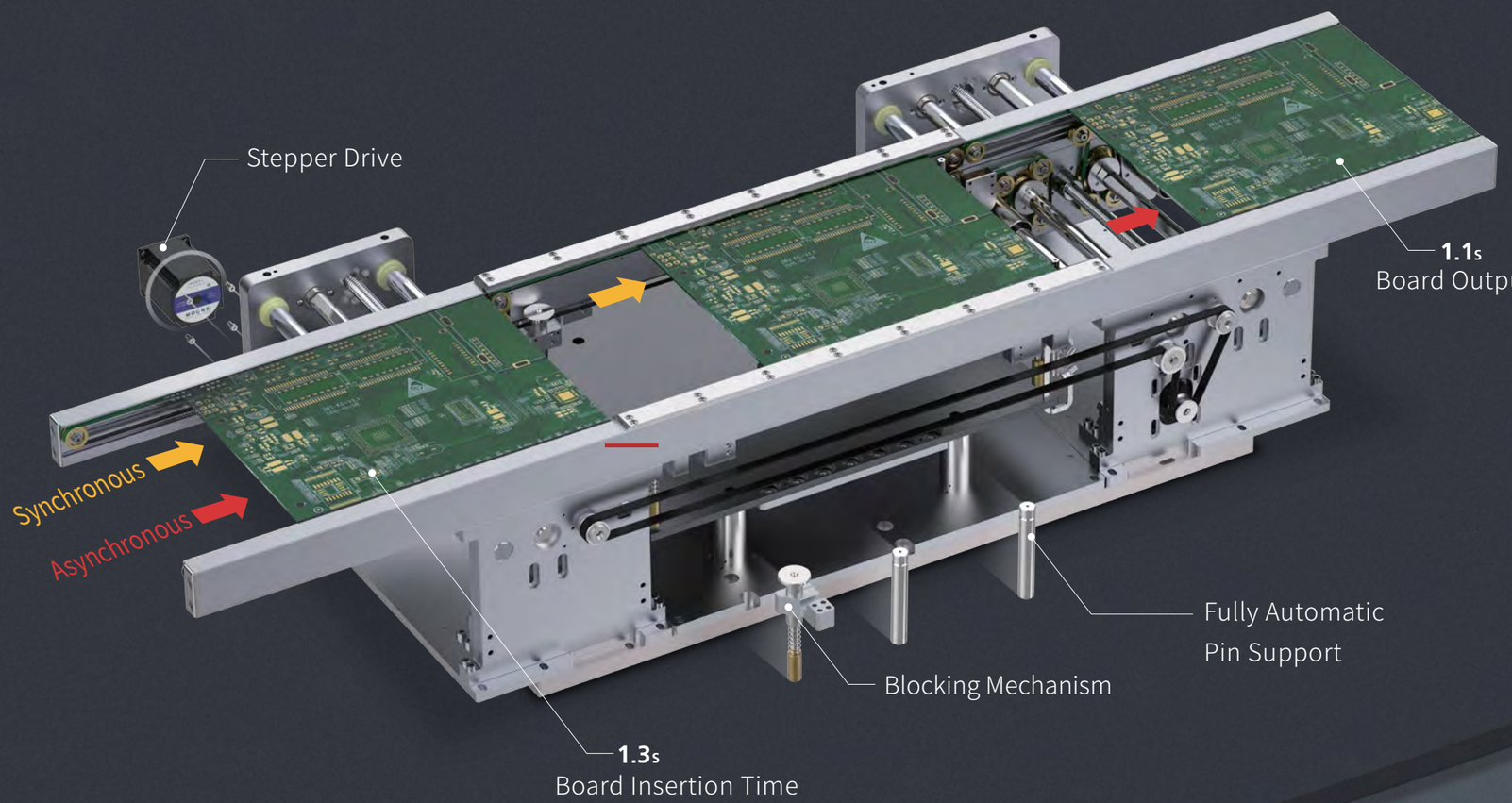
Secondary Pressing of PCB

400mm | **70-400mm**

50-550mm



※ Specific Compatible Sizes Depending on Machine Model

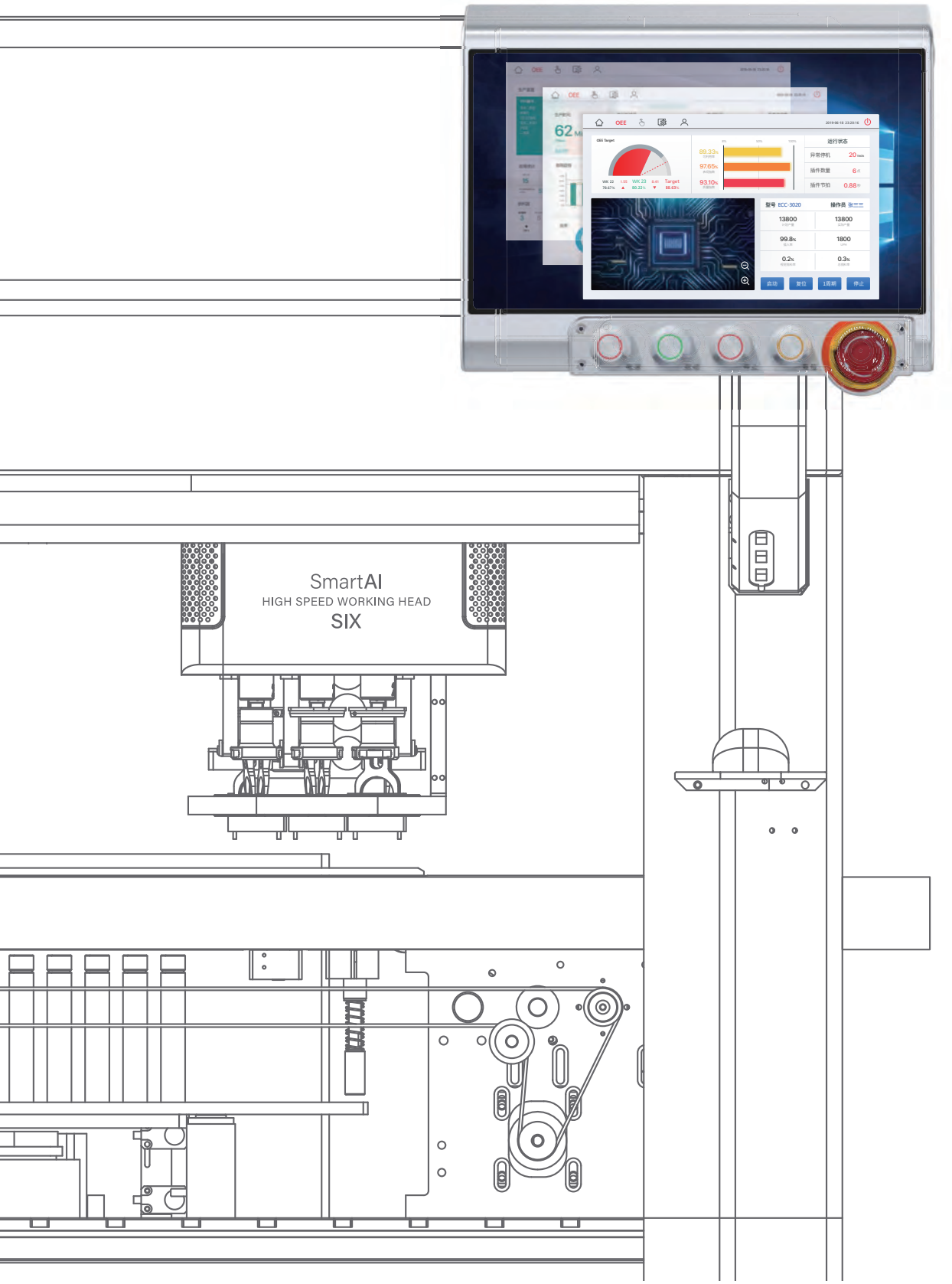


Optional Belt or Chain Conveyor

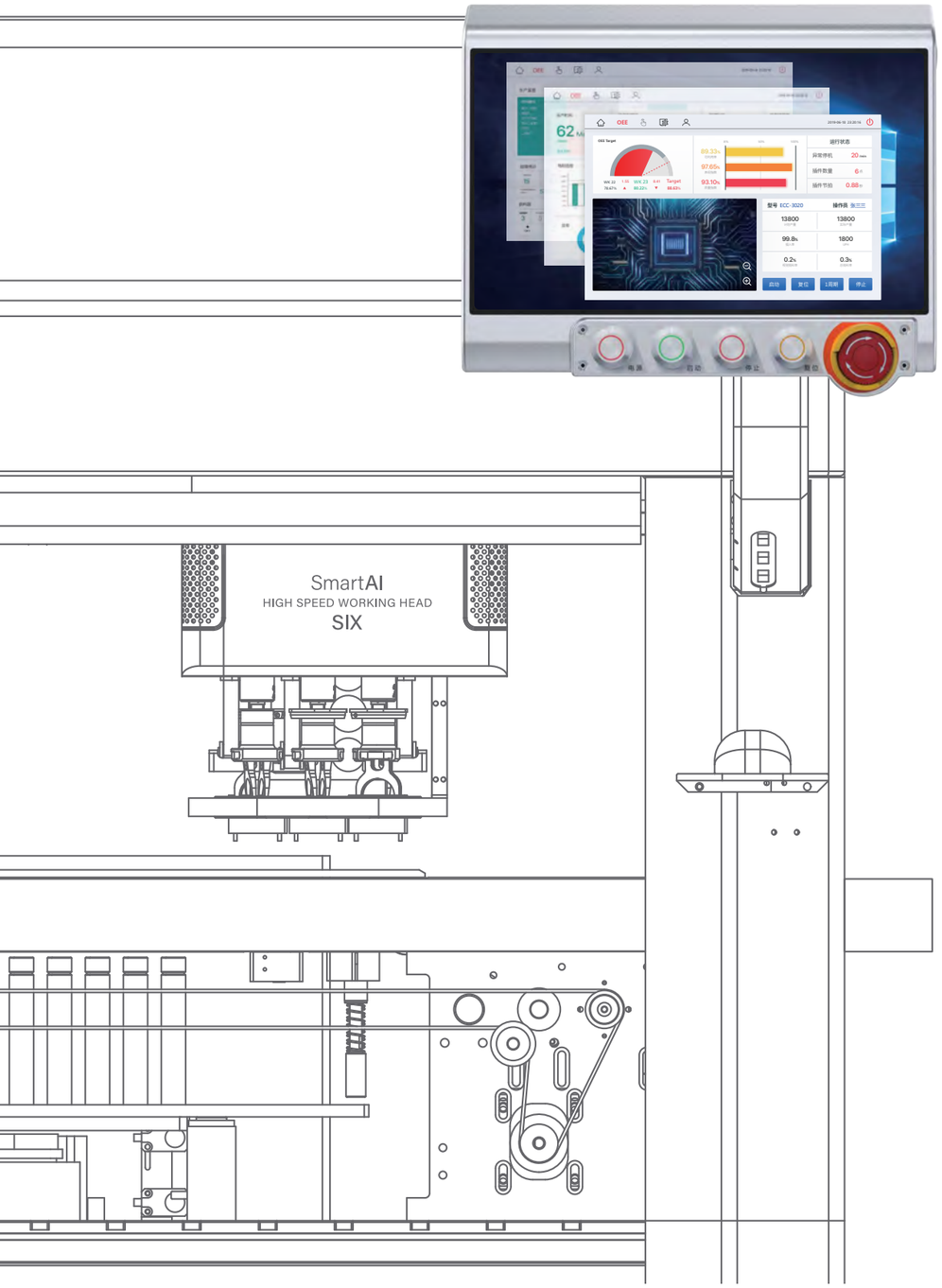




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Simplifying Complexity, Ultimate Simple Programming Method Allows You to Complete Programming Work Easily and Efficiently, Achieving Quick Changeover

SmartAI™Pro 3.0

SmartAI™Pro3.0 built on years of automation experience and familiarity with client application scenarios and process technologies, embodies the 'simplifying complexity' philosophy. Combining deep learning algorithms, it enables you to complete programming tasks effortlessly and efficiently, achieving rapid model changeover in an extremely simple manner.

Supports DXF, Gerber, and other files	Programming Method: Offline/Online	Programming Time ⩽30min	Programmable Storage 1000个
Automatic Optimization of Insertion Sequence	Warm-Up Function ⩾10min	One-Click Model Change QR Code Model Change	Visual Automatic Alignment Function
Bad Board Sorting Function (No Insertion for Defective Boards)	Feeder Quick Positioning Function	Height Measurement Module	Pressure Module

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中国制造 2025

FACTORY OF THE FUTURE

Smart Factory 大数据

Big Data

未来工厂 智能工厂

INDUSTRY 4.0

Smart Factory Solution 标准化 精益化 自动化 信息化 智能化

聚焦电子制造 **FOCUS ON EMS**

积木自动化

Flex Automation Platform

Through-Hole Inserter

异形插件机

Lean Production SMT工厂

Superfast Robotics

IoT 物联网

Automation

SmartAI Pro3.0 智能制造

AI+DIP Workshop

MES BI

RFID

OEE

Zigbee CLOUD

ProEasy Scara Robot

工业机器人

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The Future of Manufacturing - Intelligent Automation

SmartAI™Pro 3.0

With over 10 years of accumulated automation experience and an understanding of customer application scenarios and process technologies, the Zhixin software development team has created the SmartAIPro 3.0 data system. This system uses a B/S architecture to integrate industrial software with automation equipment, extend communication networks, and obtain data on equipment operation and production processes. It allows cross-platform access, offers flexible software interfaces and a variety of hardware interfaces. Through analysis and processing, the data is transformed into reports, dashboard information, and analytical results, helping you make informed decisions to improve factory efficiency and overall equipment effectiveness, achieving 'intelligent manufacturing and smart factories.'

OEE Management System

Overall Equipment Effectiveness (OEE) allows you to easily and timely understand equipment operating conditions, helping you improve production efficiency, avoid losses, and reduce production costs.



SQLite

TCP/IP Web service

MES Management System

Import equipment operation data, production data, and product quality data into an SQLite database, and interface with the MES system using various M2M technologies.

Communication Protocols and Interface Types

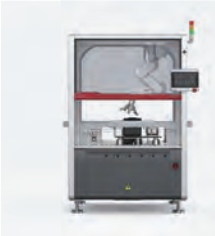
TCP/IP、Web Service、Modbus、RJ45Network Port, Serial Port

Seamless Integration

SIEMENS（西门子）　Pangus（盘古信息）　MOREWIS（摩尔元数）　Other Brands/Customized EMS Systems

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Technical Specification

High-speed Irregular Shape Insertion Machine				
Model	680	1200	1600	1800
PCB Size	410*400mm	300*350mm	410*450mm	410*400mm
	800*400mm			
PCB Thickness	0.8-5mm			
PCB Weight	Max.6kg			
Clamping Edge Width	3mm/5mm			
Plugin Performance				
Insertion Speed	5300cph	1800cph	2000cph	1600cph
Insertion Cycle Time	0.68 sec/part	2 sec/part	1.8 sec/part	2.2 sec/part
Repeat Positioning Accuracy	±0.02mm			
Characteristics of Workhead				
Picking Method	Gripping/Pickup			
Number of Working Heads	6	4/6	4	4/6
Component Dimensions	40mm	35/50mm (Customized)		
Component Height	35mm	40/50mm (Customized)		
Component Weight	Max.300g	Max.500g		
Insertion Direction	0-360°			
Insertion Angle	Plane			Free Angle
PCB Conveyor System				
Conveying Structure	Three-stage			
Conveying Method	Belt/Chain			
Conveying Mode	Synchronous/Asynchronous			
Conveying Speed	Max.800mm/s			
Conveying Direction	L→R or R→L			
Width Adjustment	Automatic Width Adjustment			
Fixed Edge Position	Front End			
Component Clearance Height	Up 45 / Down 20			
Material Feeders				
Vertical Tape	20	20	20	20
Horizontal Tape	16	16	16	16
Tube Feeding	16	16	16	16
Tray Feeding	4	4	4	4
Vibratory Bowl Feeding	16	16	16	16
Machine Information				
Operating Voltage	220VAC ±10%	220VAC ±11%		
Power Rate	1.8KVA	1.8KVA	1.8KVA	1.8KVA
Operating Pressure	0.5±0.05Mpa 50L/min	0.5±0.06Mpa 50L/min		
Machine Port	SMEMA (European-style 14-pin)			
Machine Dimensions	975*1295*1500mm	1211*1111*1800mm	1211*1210*1800mm	1146*1011*1800mm
Machine Weight	1000kg	950kg	1050kg	950kg
Protections				
Certifications	ISO9001、CE			
Safety Door Design	Safety Door Switch (Stop when door opens), Safety Light Curtain			
Pressure Failure Alarm	Electronic Pressure Switch Protection			

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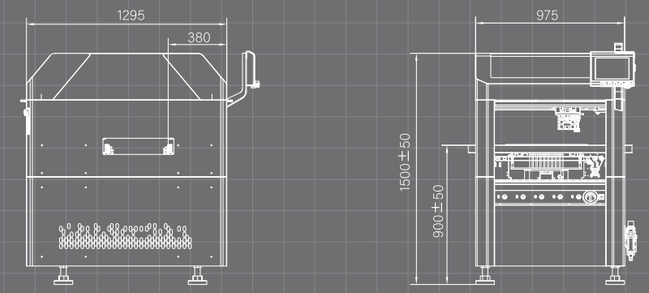
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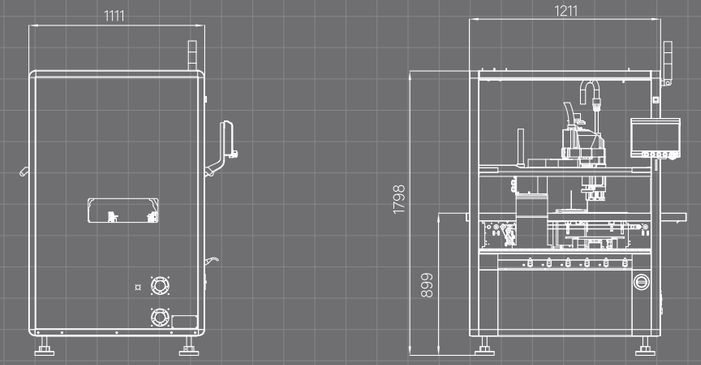
Dimensions

Unit : mm

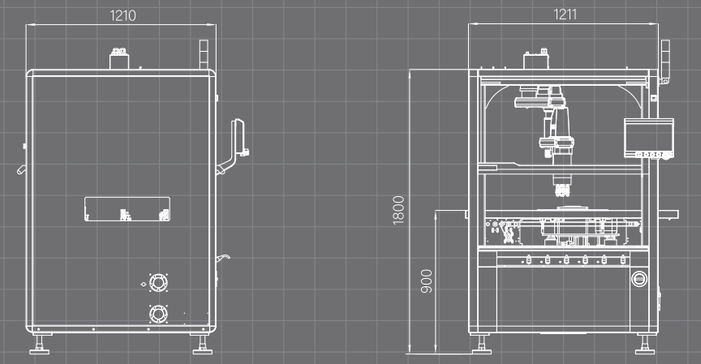
Superfast 680
Left View/Front View



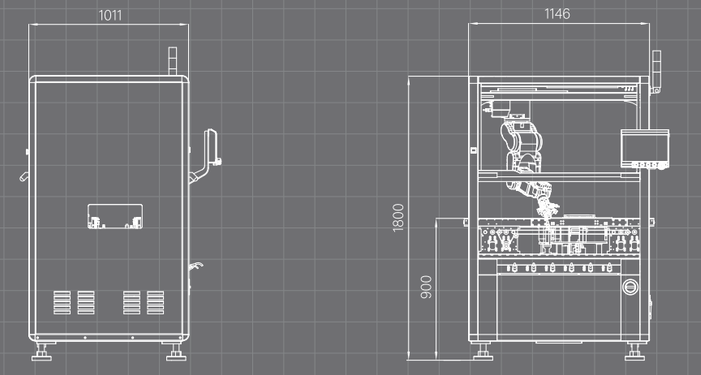
Robotics 1200
Left View/Front View



Robotics 1600
Left View/Front View

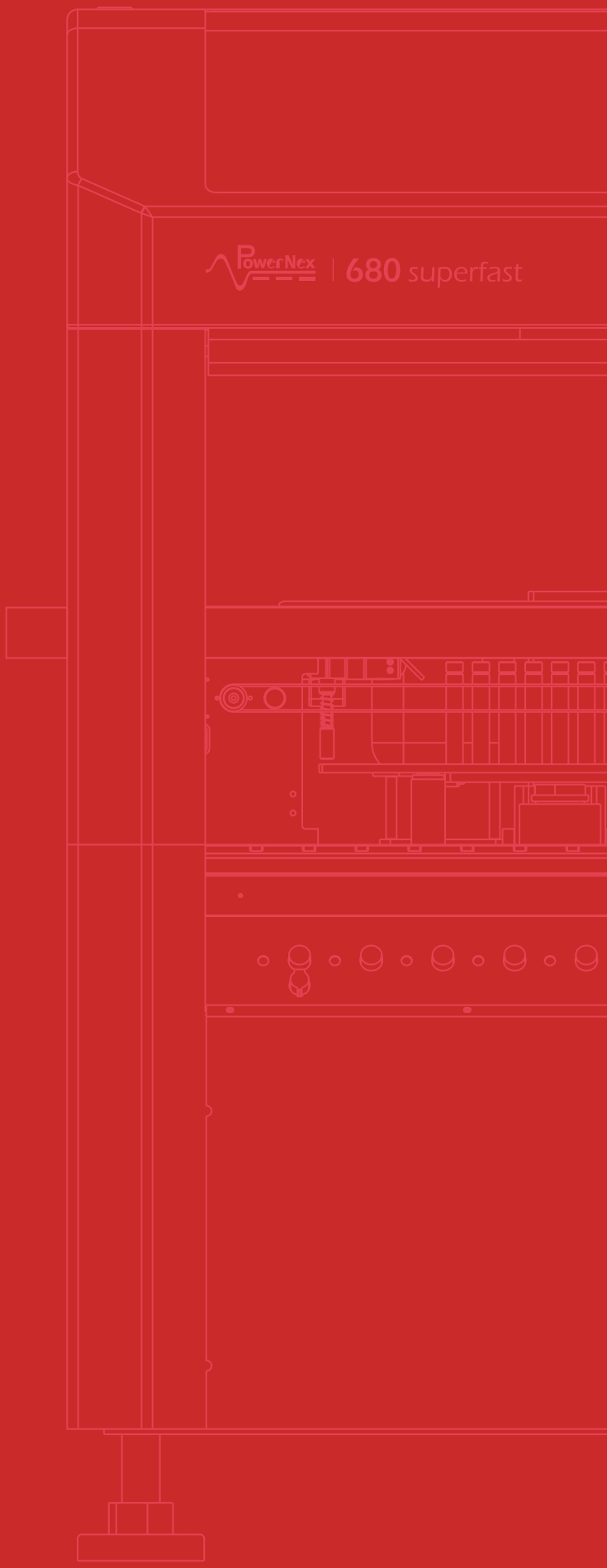


Robotics 1800
Left View/Front View



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PowerNex



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