

S H A R E W E L L

HIGH SPEED IRREGULAR SHAPE PLUG-IN MACHINE

Product Manual



Contact Us



Share Well Technology
Official Account



Video Official Account

SUZHOU SHARE WELL AUTOMATION TECHNOLOGY CO., LTD.

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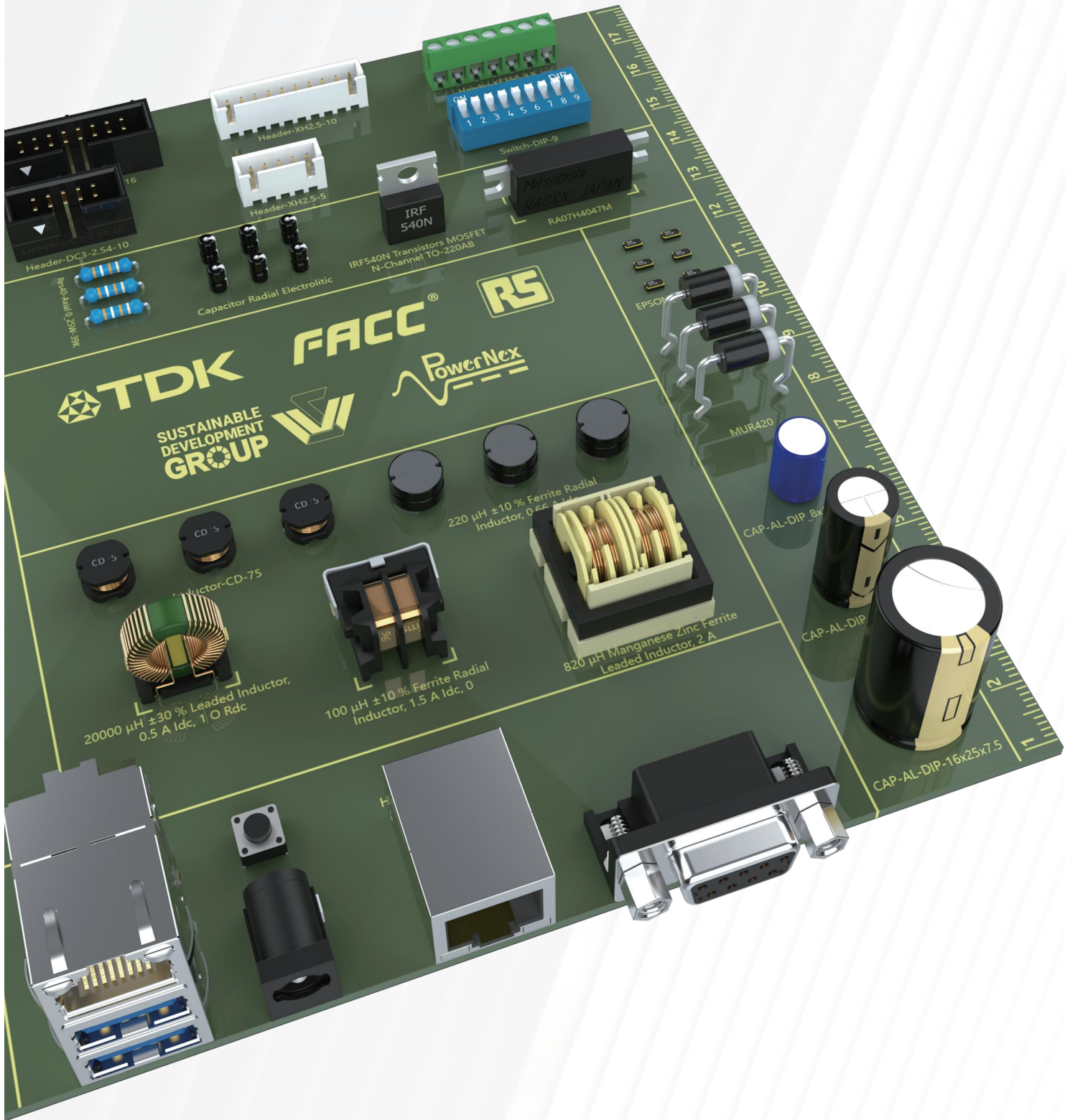



SUZHOU SHARE WELL AUTOMATION TECHNOLOGY CO., LTD.



PowerNex

Achieve **98%** Through-Hole Components

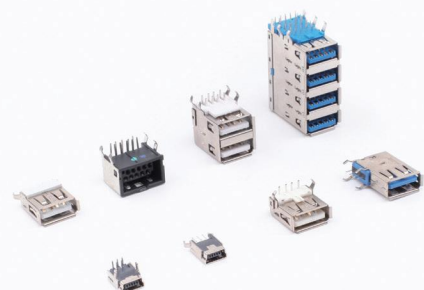


 Vertical Tape Feeder	 Diode	 Fuse	 Metal Film Resistor	 Safety Capacitor	 Thermistor
	 Electrolytic Capacitor	 Magnetic Coil	 Triode	 PPN Capacitor	 Varistor
 Horizontal Tape Feeder	 Light Emitting Diode	 MKP Capacitor	 Resistor	 Inductor	 Jumper Wire
	 4-Pin Header	 19-Pin Socket	 Potentiometer	 Toggle Switch	 Audio Port
 Vibratory Bowl Feeder	 Power Port	 Tact Switch	 Inductor	 S-Video	 Square Capacitor
	 9-Pin Array Resistor	 Fuse	 5-Pin Socket	 10-Pin Socket	 7-Pin Socket
 Tubular Feeder	 Bridge Rectifier	 Triode	 Bridge Rectifier	 Optocoupler	 IC
	 Network Transformer	 Network Transformer	 PTC Resistor	 Fan Capacitor	 Relay
	 Relay	 Relay	 Relay	 Relay	 Relay

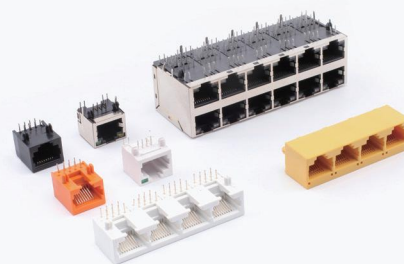
Common Motherboard Ports ▶



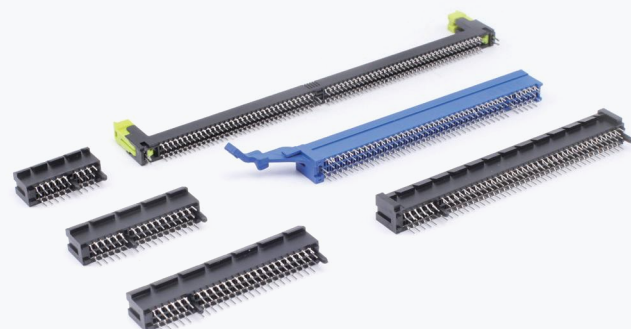
◀ USB Port



RJ45 Port ▶



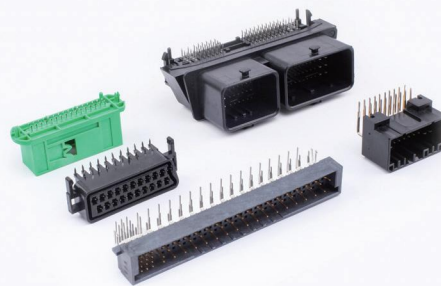
Large Multi-Pin Connector ▶



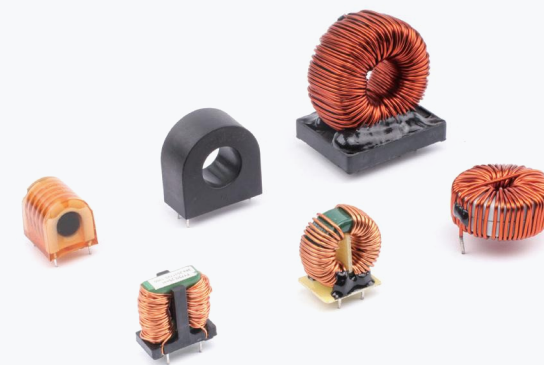
◀ S-Video Module



Automotive Electronic Connector ▶



Inductor/Choke Coil ▶



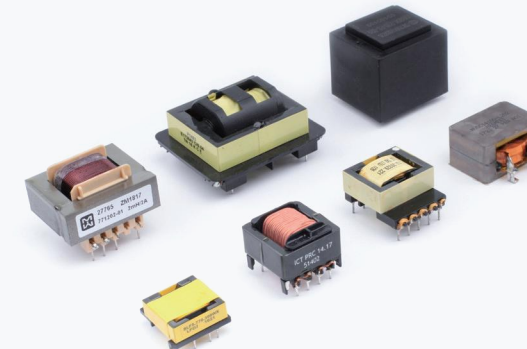
◀ Electrolytic Capacitor



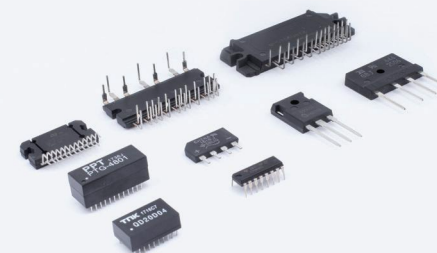
Relay/Film Capacitor ▶



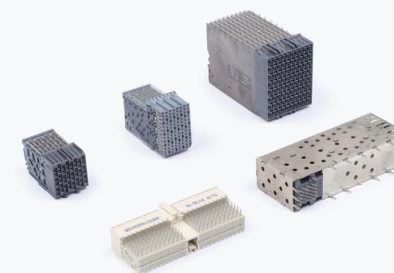
Transformer ▶



◀ Integrated Circuit



Communication Industry Connector ▶



680 High Speed Irregular Shape Plug-in Machine

680superfast

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

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



680 High Speed Irregular Shape Plug-in Machine

680superfast

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

Cycles per Hour
(Cph)

0.68

Placement Maximum Speed
(S/C)

± 0.02

Repeat Positioning Accuracy
(mm)

≥ 1.33

Process Capability Index
(CPK)

※ Test results under specified conditions of our company.

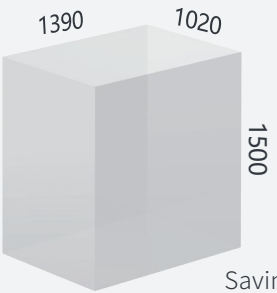
- Insert Anomaly Detection (Standard)
- Insert Pressure Detection (Optional)
- Component Height Detection (Optional)



SmartAI SIX Gantry Head

Integrated Light Source | Servo-driven | 6 Working Heads

Compact Design
Maximizes Space Utilization



Unit: mm

> 30%

Saving More Space Compared
to Similar Products

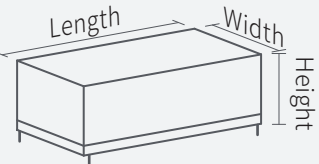
Material Specification

Length
2-30mm

Height
2-30mm

Width
1-20mm

Weight
300g Max

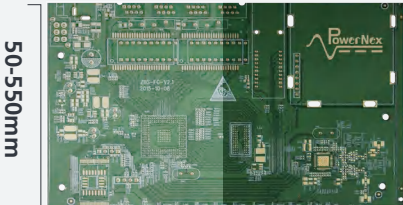


PCB Specification

Thickness
1-3mm

Weight
5kg Max

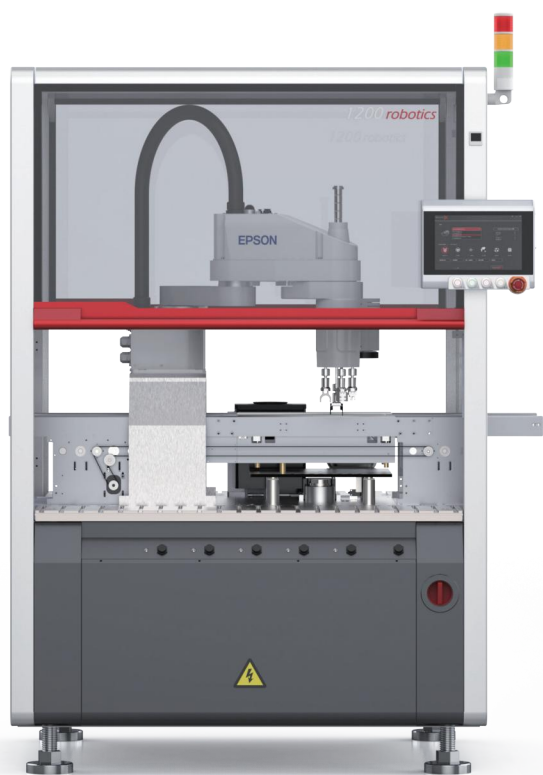
Secondary Pressing of PCB
400mm 70-400mm



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 *Robotics*

Robotic Irregular Shape Plug-in Machine

Integrated Seated Robot | Achieve High Cost-Effectiveness

4/6

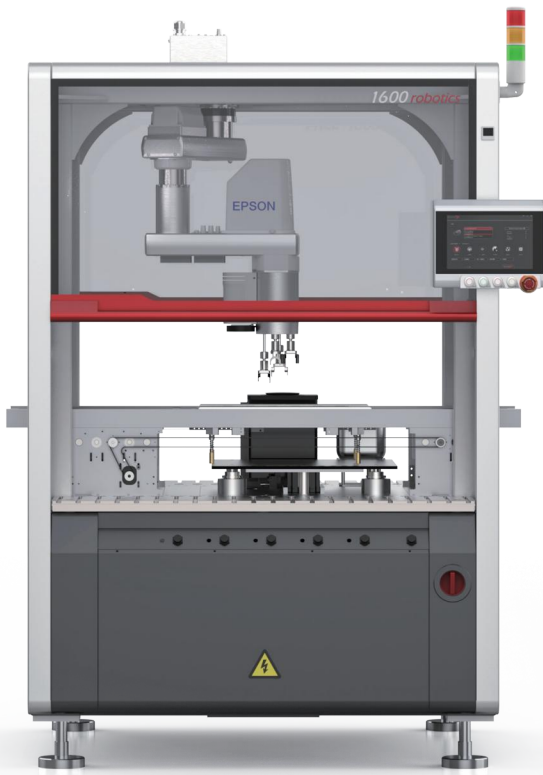
Work Head (pcs)

2.0

Placement Maximum Speed
(S/C)

±0.03

Accuracy(mm)



1600 *Robotics*

Robotic Irregular Shape Plug-in Machine

Integrated Hoisting Robot | Achieve Wide Working Range

4

Work Head (pcs)

1.8

Placement Maximum Speed
(S/C)

±0.03

Accuracy(mm)



1800 *Robotics*

Robotic Irregular Shape Plug-in Machine

Integrated Six-Axis Robot | Achieve Multi-Angle Insertion

4/6

Work Head (pcs)

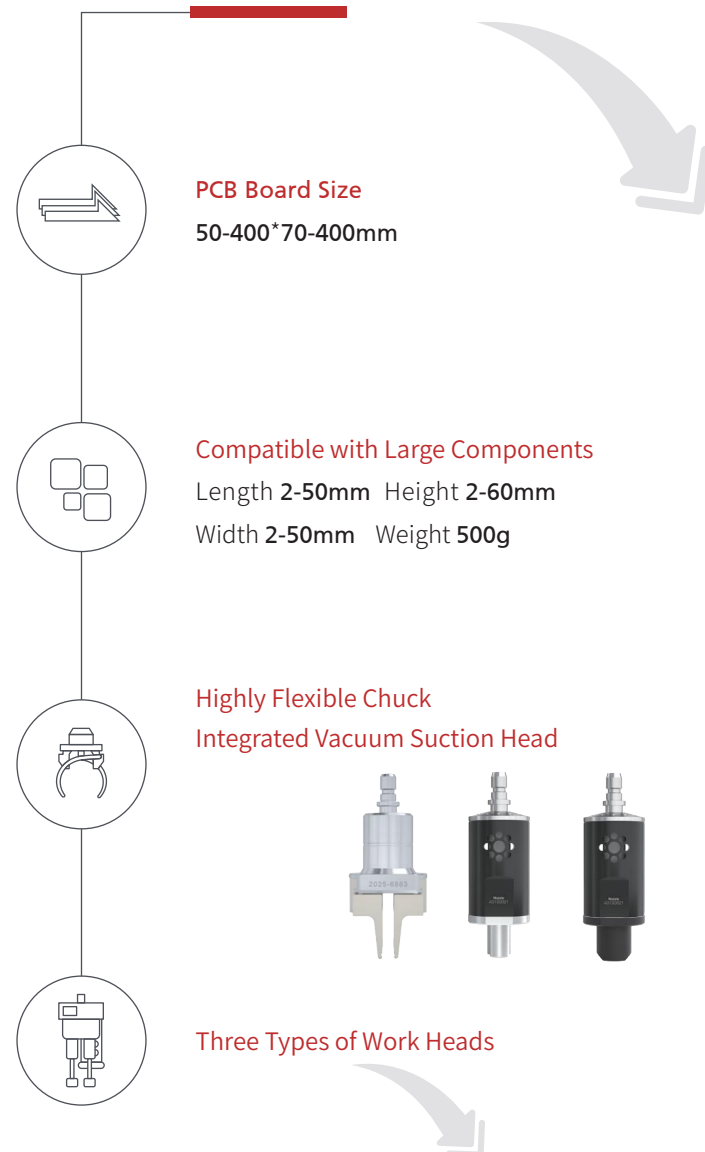
2.2

Placement Maximum Speed
(S/C)

±0.04

Accuracy(mm)

Compatibility



The future development trend of 'robots replacing humans' is to integrate top-brand robots to achieve high flexibility, high compatibility, and high quality, thereby reducing equipment failure rates and increasing the investment value of equipment.



Perfect integration with major brand robots!

ABB KUKA EPSON YASKAWA FANUC

Flexibility

Miniaturized, Space-saving
1250*1200*1800mm

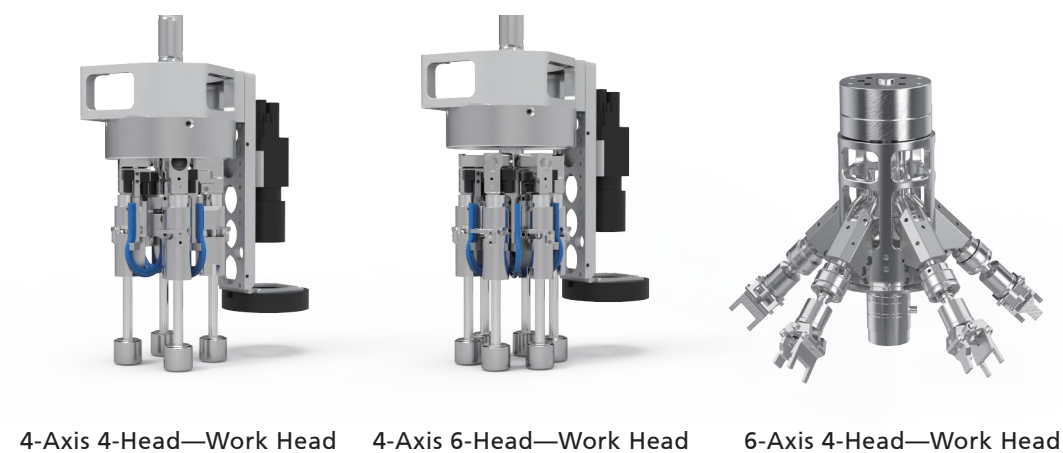
iVT Vision System

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

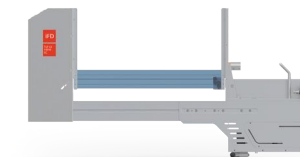
Forming/Shaping Device, can be equipped on all feeders

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)



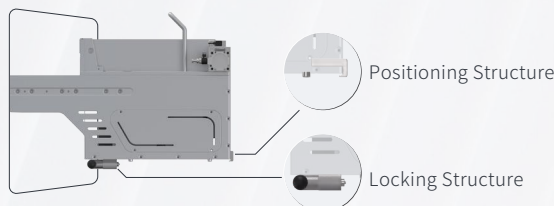
4 PCS
Tray Feeder
(Tray-Fed Material)



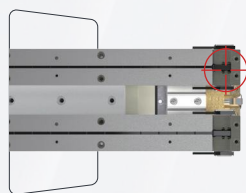
Host and feeding device
Modular design concept
Enables flexible configuration

Dual-sided feeding, rational layout, enabling flexible configuration and quick replacement

2 min
Quick Replacement



30s
Quick Positioning



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)



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.



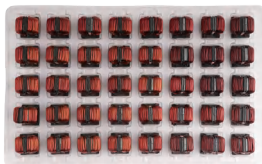
+ ZDF series
Vibratory Bowl Feeder
Bulk Material Feeding



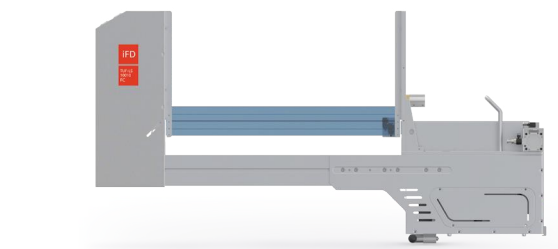
- 0.5s Feeding Speed
- 30min Continuous Feeding
- Forming Function
- Shaping Function



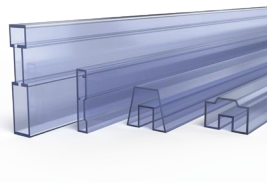
+ TRF series
Tray Feeder
Tray-Fed Material



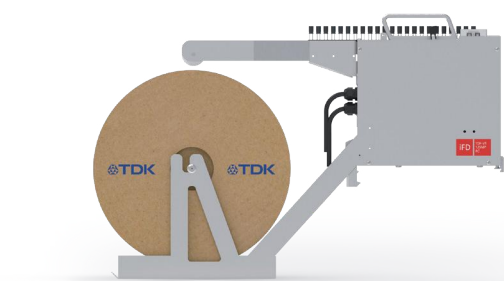
- 0.8s Feeding Speed
- 20盘 Maximum Capacity
- Forming Function
- Shaping Function



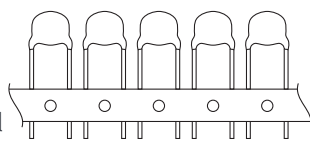
+ TUF series
Tubular Feeder
Tube-Fed Material



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



+ TDF-VT series
Vertical Tape Feeder

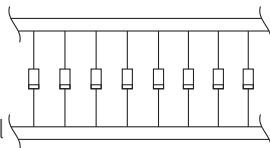


Compatible with Reel/Box-Fed Material

- 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

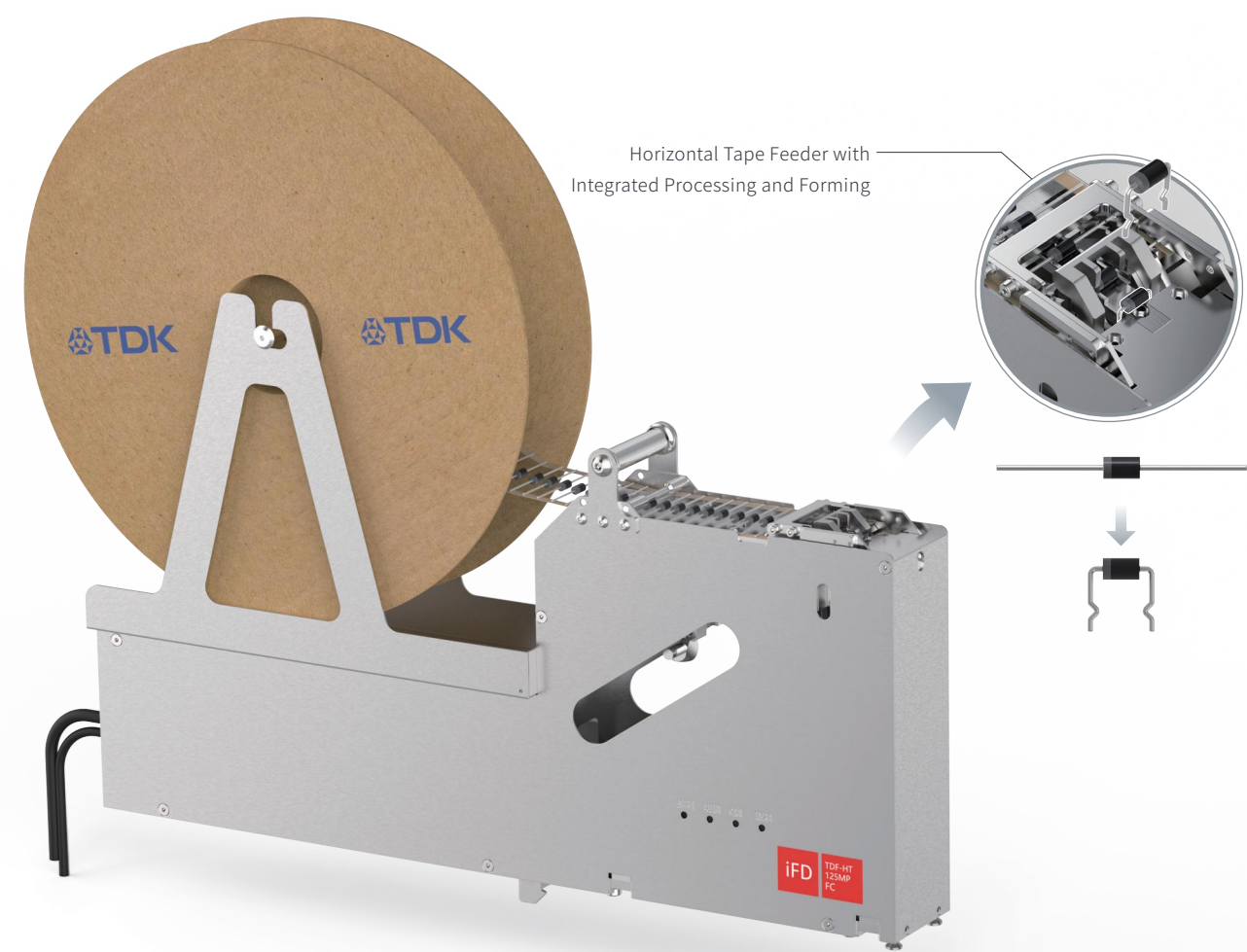
Customized services provided based on material feeding methods or component characteristics



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

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.



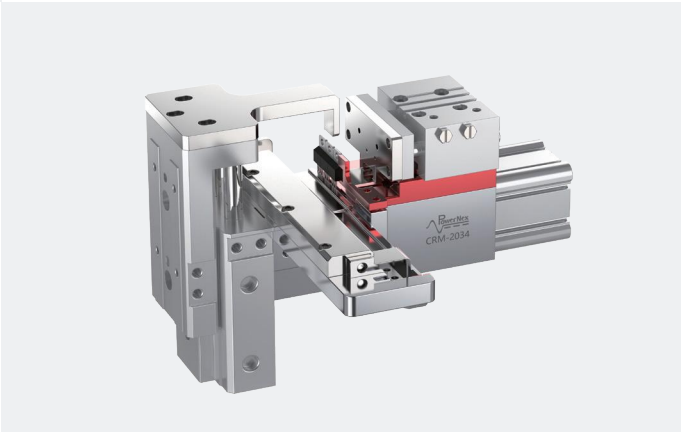
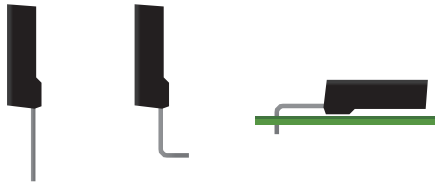
For special components, we offer customized services, striving to turn the impossible into possible!



Safety Capacitor Shaping



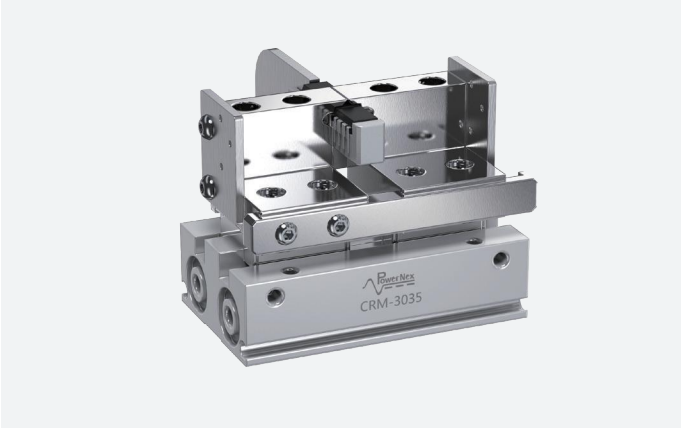
Rectifier Bridge Shaping

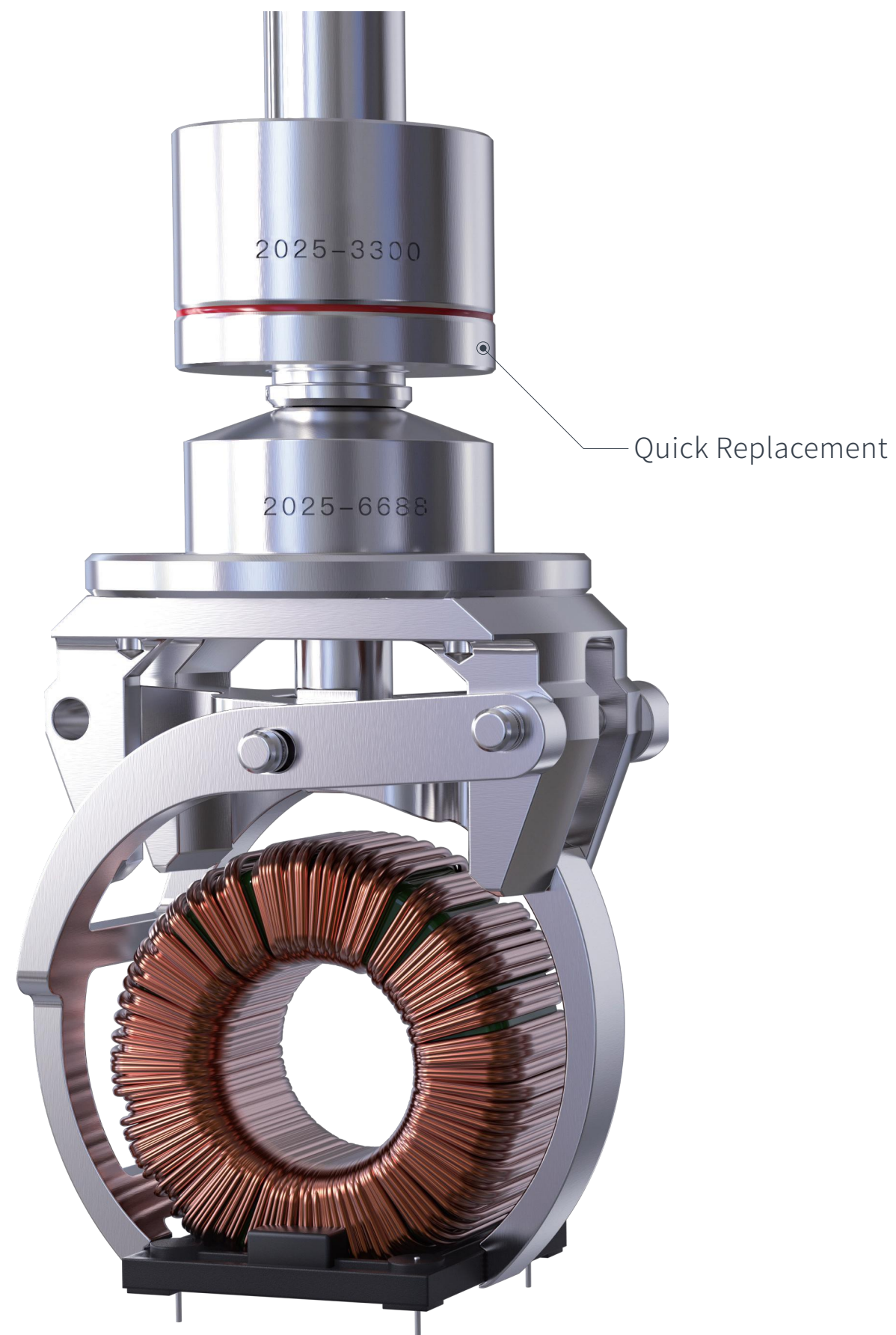


Coreless Inductor Shaping



IC Shaping

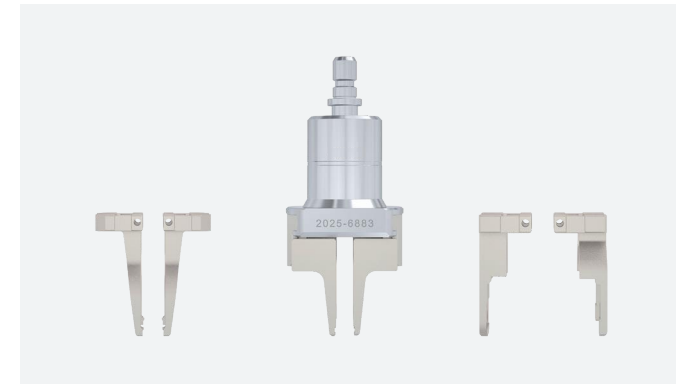




Air Conditioner Mainboard Common Mode Inductor Custom Gripper

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



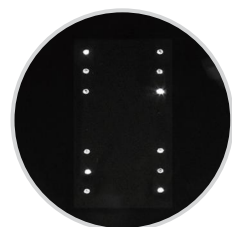
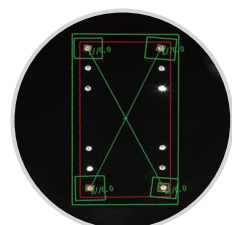
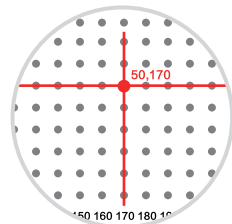


Image Capture Effect



PIN Quality Inspection



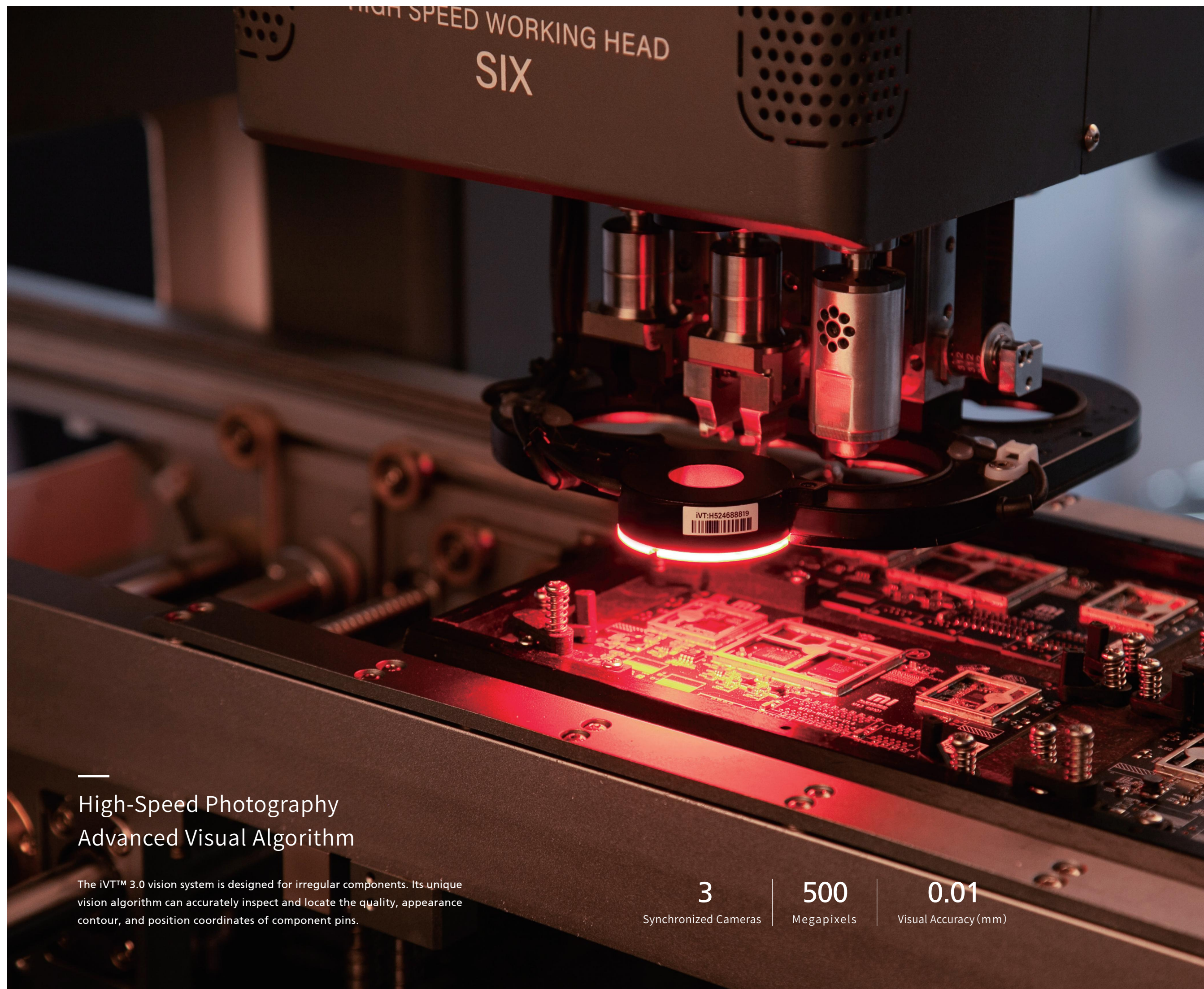
PIN Position Coordinates



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.



3
Synchronized Cameras

500
Megapixels

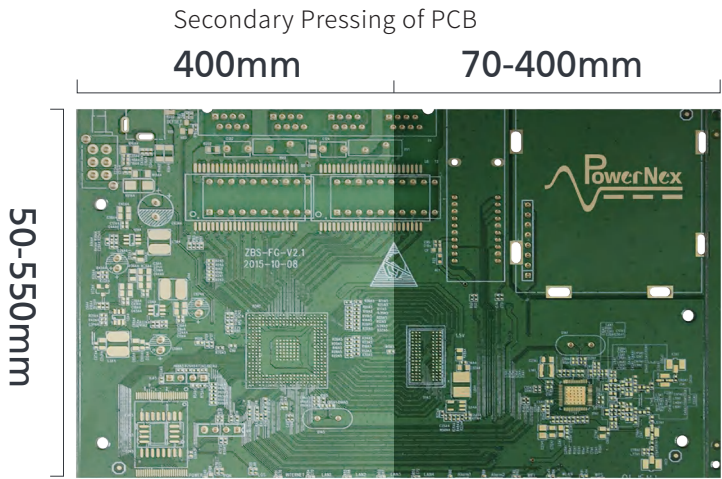
0.01
Visual Accuracy (mm)

PCB Transmission Device Fully CNC Controlled

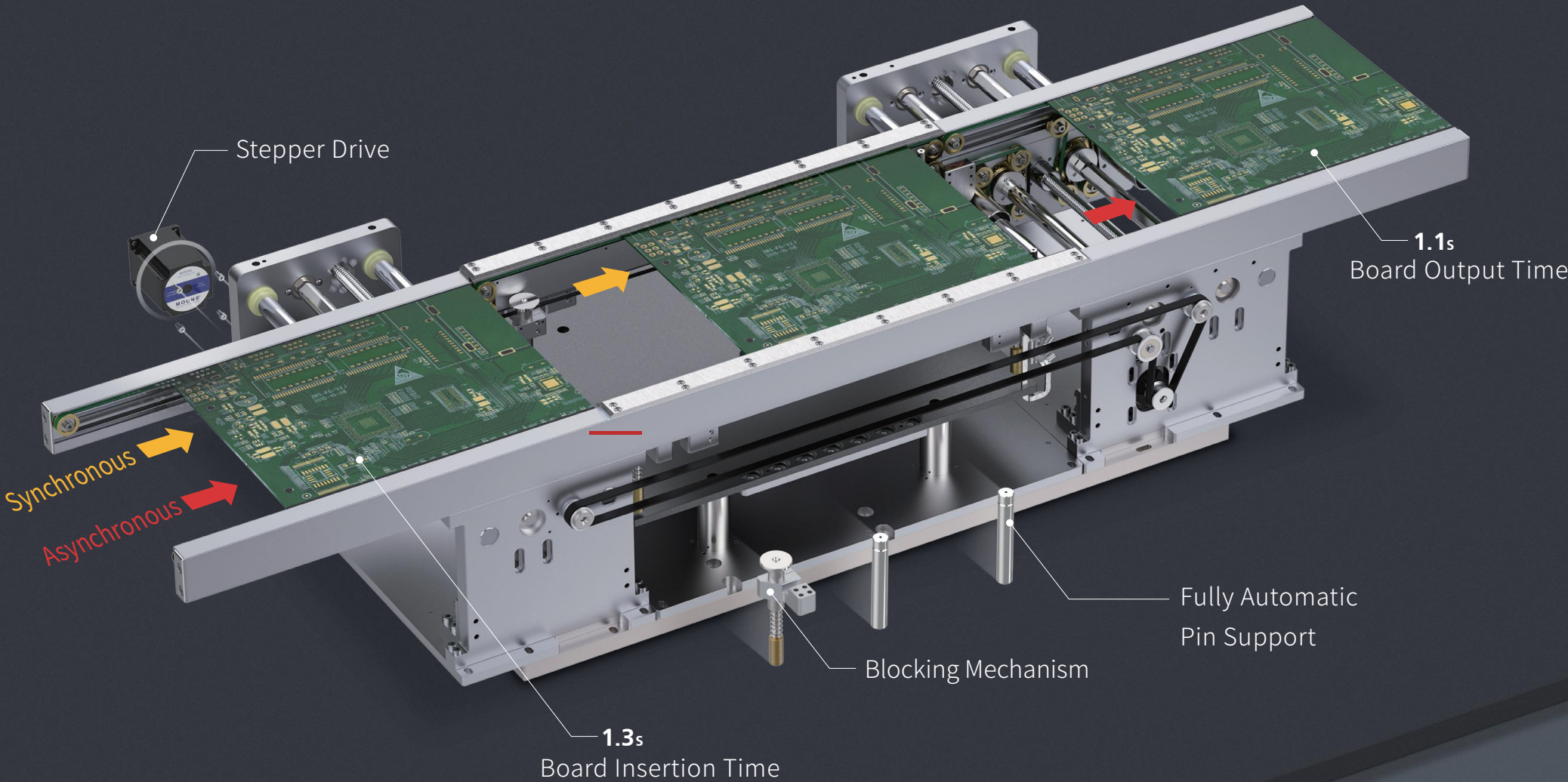
The three-section track features a modular design and is controlled by fully numerical control technology, enabling synchronous/asynchronous PCB board transfer, ensuring fast, stable, and precise positioning.

Thickness
1-3mm

Weight
Max 5kg

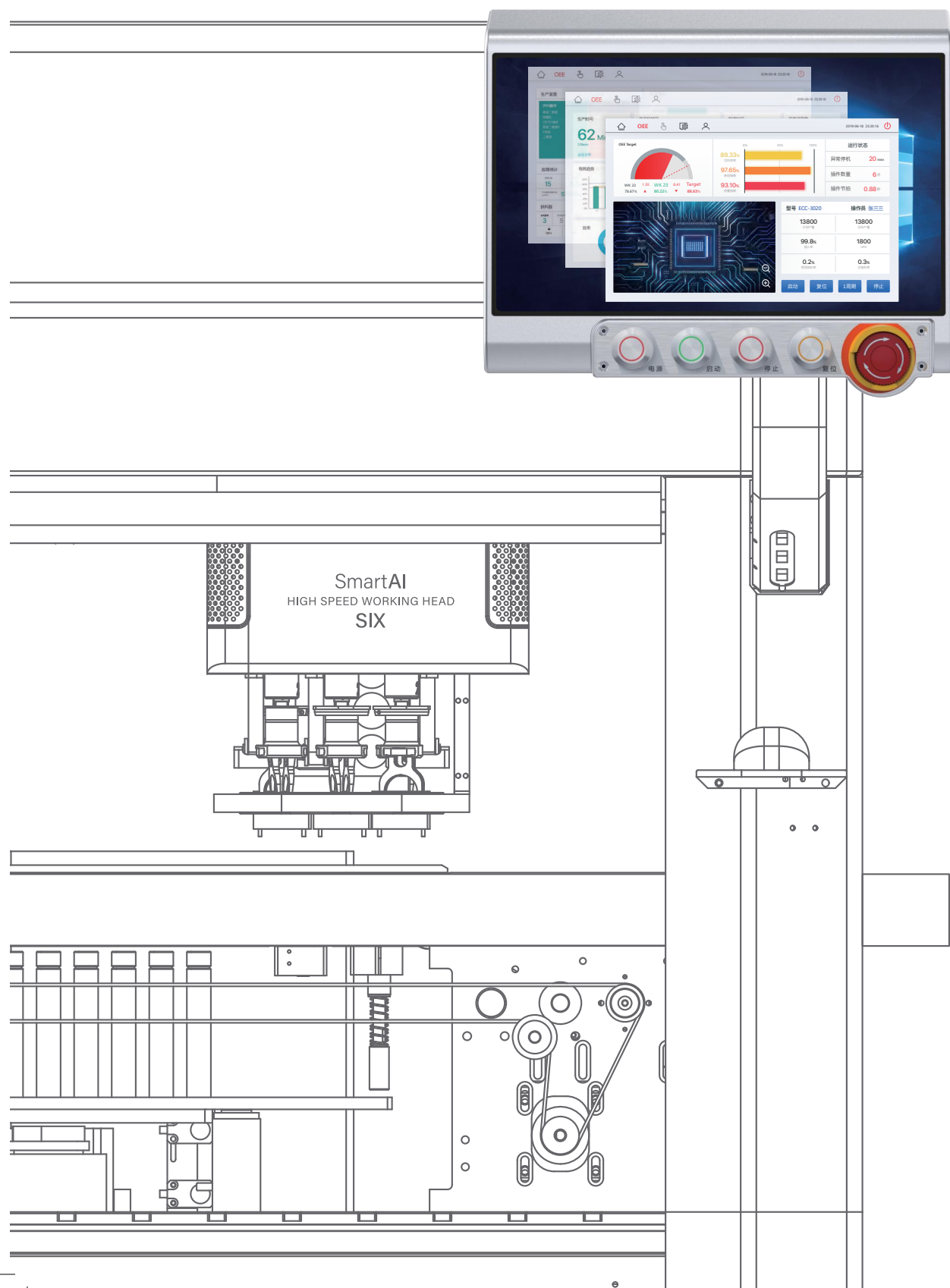


※ Specific Compatible Sizes Depending on Machine Model



+ Optional Belt or Chain Conveyor





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

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

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

Lean Production SMT工厂

IoT 物联网

Automation

AI+DIP Workshop

RFID

Zigbee

CLOUD

ProEasy Scara Robot

工业机器人

Through-Hole Inserter

异形插件机

Superfast Robotics

SmartAI Pro3.0 智能制造

OEE

MES

BI

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.



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

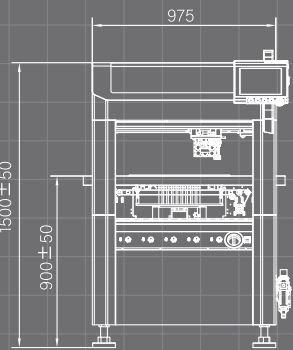
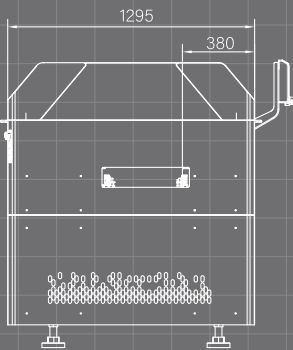
Technical Specification

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			

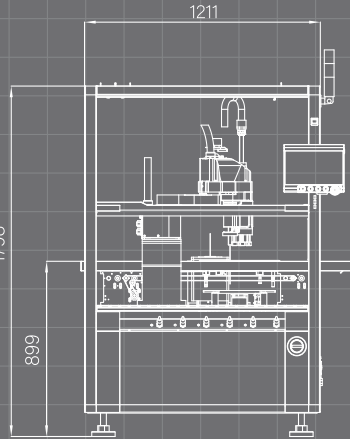
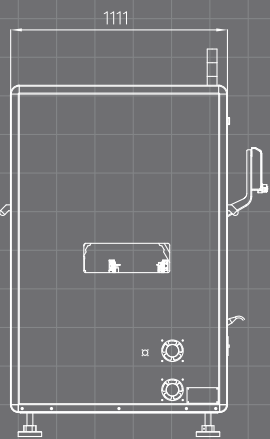
Dimensions

Unit : mm

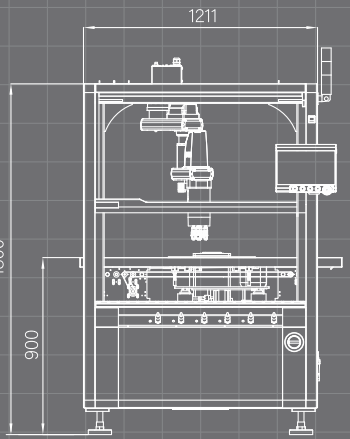
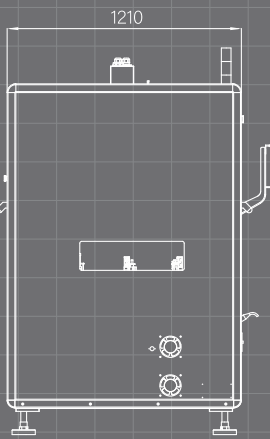
Superfast 680
Left View/Front View



Robotics 1200
Left View/Front View



Robotics 1600
Left View/Front View



Robotics 1800
Left View/Front View

