TRA PX-8S

8-HEAD SMT PICK AND PLACE MACHINE

Vision-guided placement. Flexible PCB assembly.

PRECISION AT EVERY PLACEMENT



8 HEADS
Ball spline placement

±0.05 mm
Placement accuracy

70 POSITIONS
Feeder capacity

Built for a connected SMT line.

Automatic PCB transfer, camera-based alignment and flexible material handling in one integrated placement platform.

Key Technical Specifications

TRA PX-8S | Selected specifications for production and installation planning

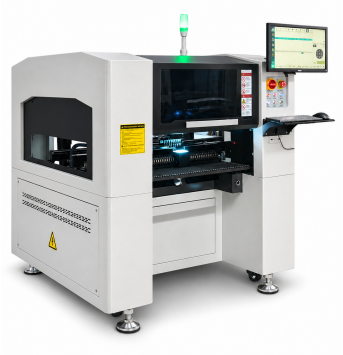
PLACEMENT & BOARD HANDLING	
Placement heads	8
Placement speed	16,000 CPH overall; 30,000 CPH theoretical
Placement accuracy	±0.05 mm
PCB size	Min. 45 × 45 mm Max. 500 × 400 mm without IC tray Max. 500 × 260 mm with IC tray
PCB thickness	Up to 3 mm
Component size / height	Up to 40 mm / up to 13 mm
Feeder / tray capacity	70 feeder positions / 1 IC tray
Vision system	PCB mark camera + fast camera; flying and fixed-image recognition
PCB transfer	Three-stage conveyor; automatic width adjustment
Programming / line interface	CSV import / SMEMA

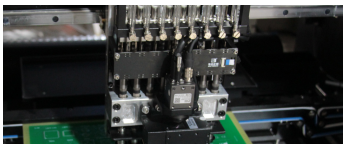
UTILITIES & DIMENSIONS	
Power supply	AC 220 V ±10%, 50 Hz
Power	2 kW rated; 0.7 kW stated working power
External air supply	0.8 MPa
Dimensions (L × W × H)	1355 × 1300 × 1450 mm
Net weight	1080 kg

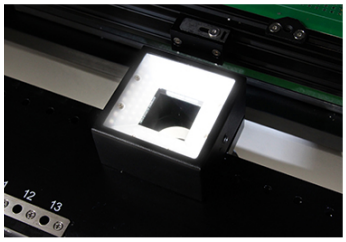
Actual output depends on the PCB layout, component mix and feeder arrangement. Feeder capacity does not specify the quantity supplied. Confirm the installed configuration when ordering.

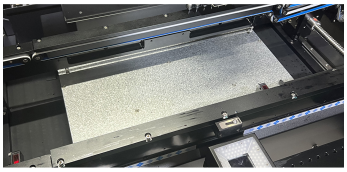
Designed Around the Assembly Process

Four views of the placement platform and its core production functions









01

Machine overview

Enclosed placement platform with an operator display and inline board handling.

02

Placement heads

Eight heads support multi-component pickup and programmed placement.

03

Flying vision

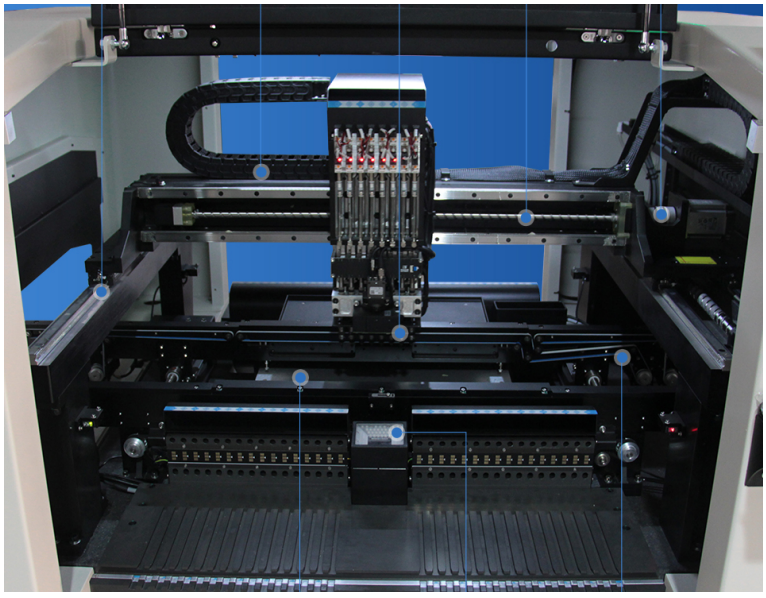
Component imaging supports recognition during suitable placement sequences.

04

PCB support

Support pins and a lift-up platform stabilize the board during placement.

A closer look inside



Integrated placement platform

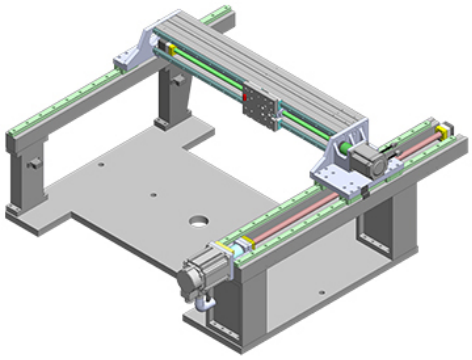
The motion system, heads, vision and PCB transport work within a single placement area.

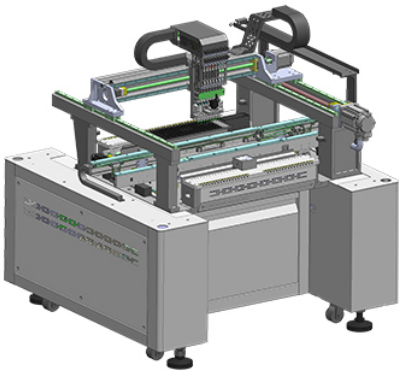
Adaptable material setup

Feeder and tray arrangements are selected around the BOM, board size and production target.

Precision Begins with the Mechanics

Controlled motion and guided PCB transport



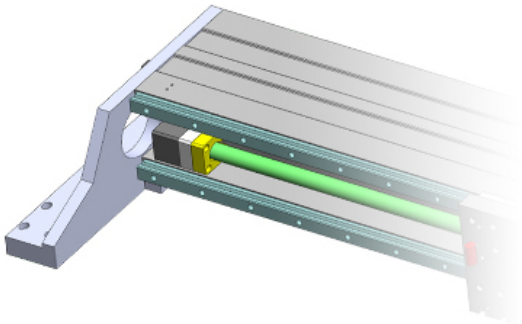


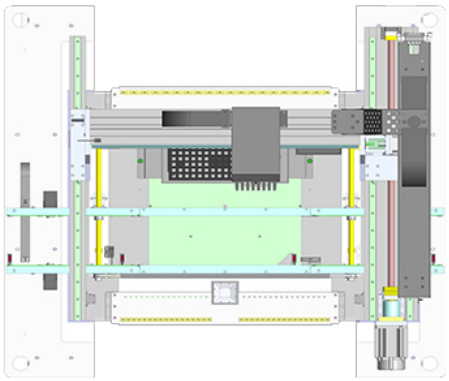
X–Y drive structure

Ground screws and linear guides support repeatable motion across the placement area.

Gantry structure

A rigid mechanical platform supports the placement head and motion assemblies.



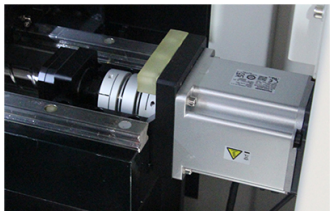


X-axis double guideway

Parallel guidance supports controlled travel between pickup and placement positions.

PCB rail structure

Board transport and placement are integrated within the machine footprint.



Panasonic servo drives

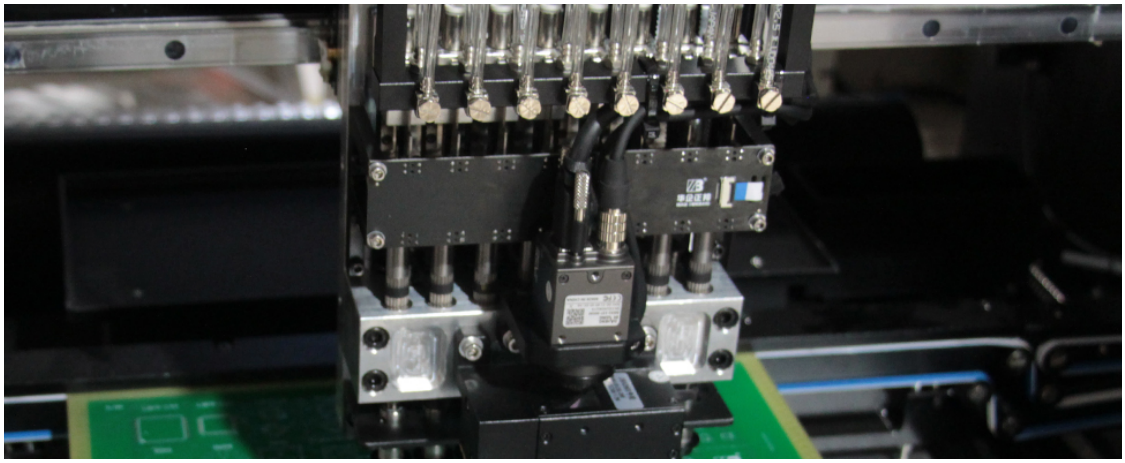
Servo-controlled X–Y motion supports consistent movement and positioning.



Ground screw and linear guide detail

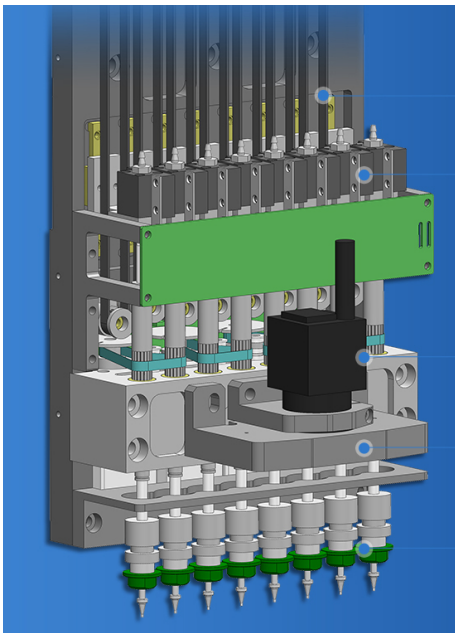
Eight Heads. Coordinated Placement.

Ball spline construction with rotational control



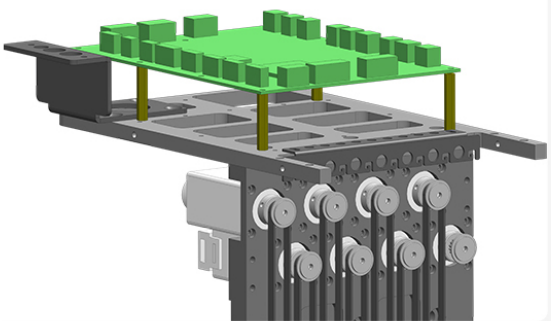
Ball spline head architecture

Guided vertical movement and rotational control align components with their programmed orientation. The head system supports repeated pickup and placement across compatible component packages.



Independent vertical movement

The head mechanism combines Z-axis movement with coordinated rotation for component positioning.



Vacuum monitoring assembly

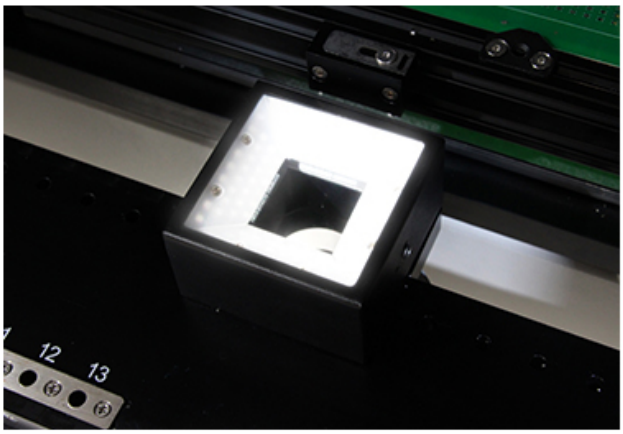
Pickup monitoring supports reliable component handling. Nozzle selection must match the component geometry.

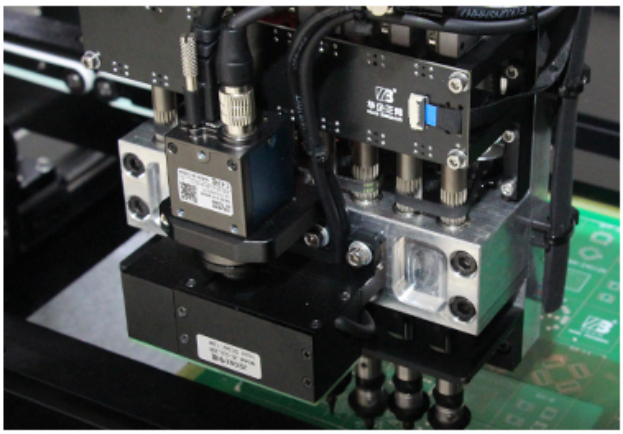
From pickup to placement

JUKI-type nozzles and a documented component height limit of 13 mm.

See the Component. Position the Board.

Camera-based alignment and three-stage PCB transfer





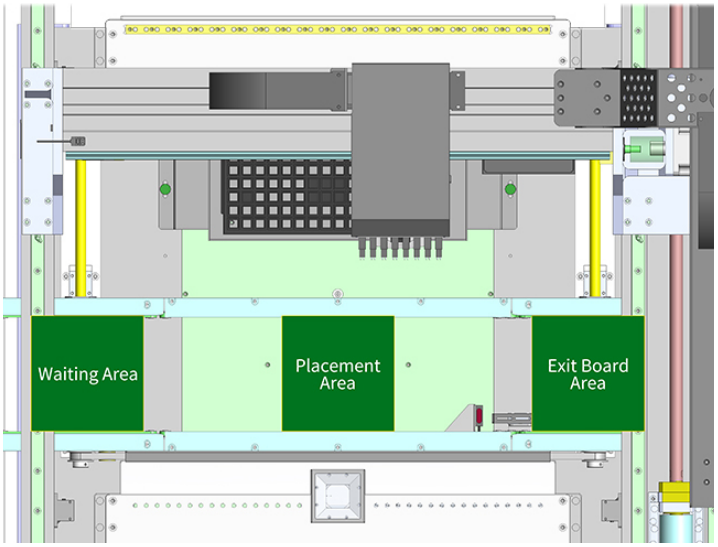
HD flying camera

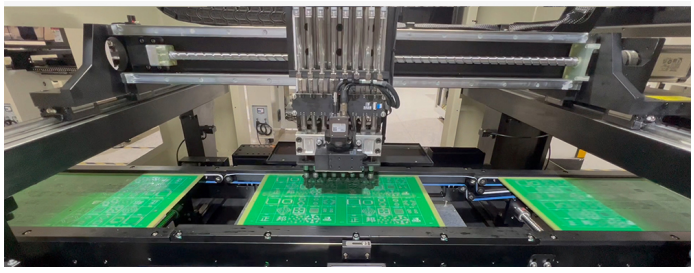
Fast component recognition supports efficient processing of suitable small components.

PCB mark camera

Fiducial recognition aligns the placement program with the actual board position.

Three-stage conveyor



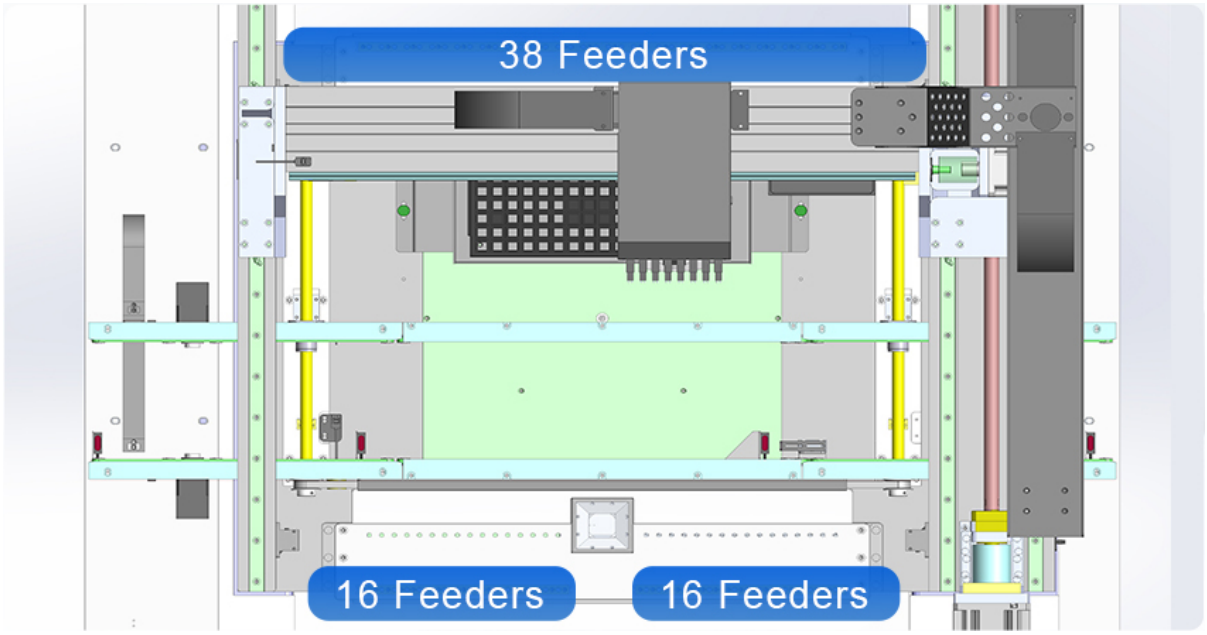


Board entry, placement and exit areas support a continuous inline workflow. Automatic rail-width adjustment accommodates different PCB widths.

AUTOMATIC WIDTH ADJUSTMENT / SMEMA CONNECTIVITY

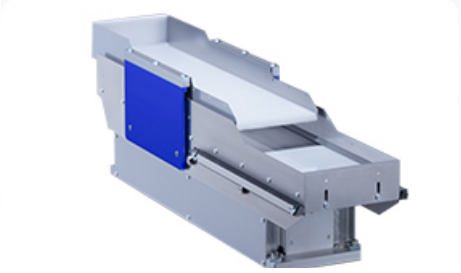
A Flexible Setup for Your BOM

70 feeder positions with support for one IC tray



Feeder capacity depends on feeder width and the selected arrangement. Installing the IC tray reduces the maximum PCB size from 500 × 400 mm to 500 × 260 mm.

Application-specific feeding



Vibrating plate

For compatible non-standard component presentation.



Vibratory bowl

Application-specific feeding for suitable parts.



Label feeder

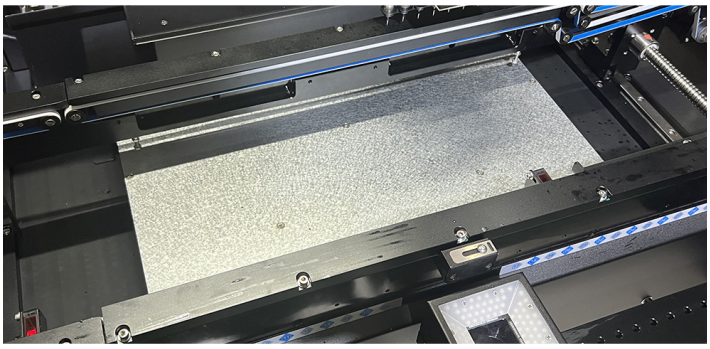
Special material handling subject to application review.

Feeder compatibility is configuration-dependent

Select the feeder platform and accessories with the machine order. NXT support shown in the source catalogue is a customized option; it is not assumed to be standard.

Stable Support. Broad Component Handling.

Practical details for day-to-day SMT production





PCB support platform

A lift-up support arrangement and movable pins stabilize the board.

Built-in vacuum pump

An oil-free pump supplies the vacuum required for component pickup.

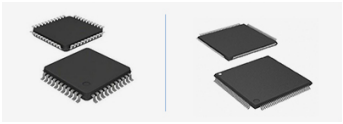
Component examples



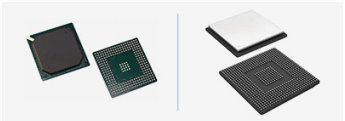
RC components



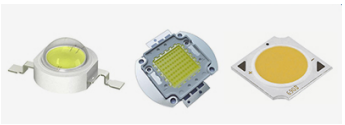
QFN



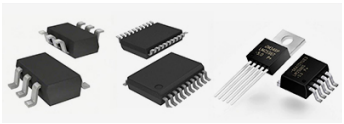
LQFP



BGA



LED



SOP



Connectors



Special components

Documented range includes 0201-designated components and larger supported packages, component size up to 40 mm and height up to 13 mm. Suitability depends on actual dimensions, nozzle selection and recognition settings.

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