

# Delivering Cost-Effective, High-Efficiency SMT/THT Automation.

Southern Machinery: Your  
Intelligent Manufacturing Solution



# Your Partner in Manufacturing Excellence

Since our founding in 2011, Southern Machinery has been dedicated to one mission: empowering smart factories. We don't just build machines; we engineer end-to-end solutions that drive productivity and profitability.

# 2011

Year Founded in Shenzhen, the heart of electronics manufacturing.

# 237+

Global EMS Clients trust our technology and support.

Proven Integration Partner for leading platforms like

**FUJI**

 **YAMAHA**

**Panasonic**

**JUKI®**

# The Industry Challenge: The 'Odd-Form' Bottleneck

While standard components are fully automated, irregularly shaped parts still rely on outdated, inefficient technology. This single point of failure undermines your entire push for efficiency.





## The Vision



## The Bottleneck



### Pain Points of Traditional Vibratory Feeders

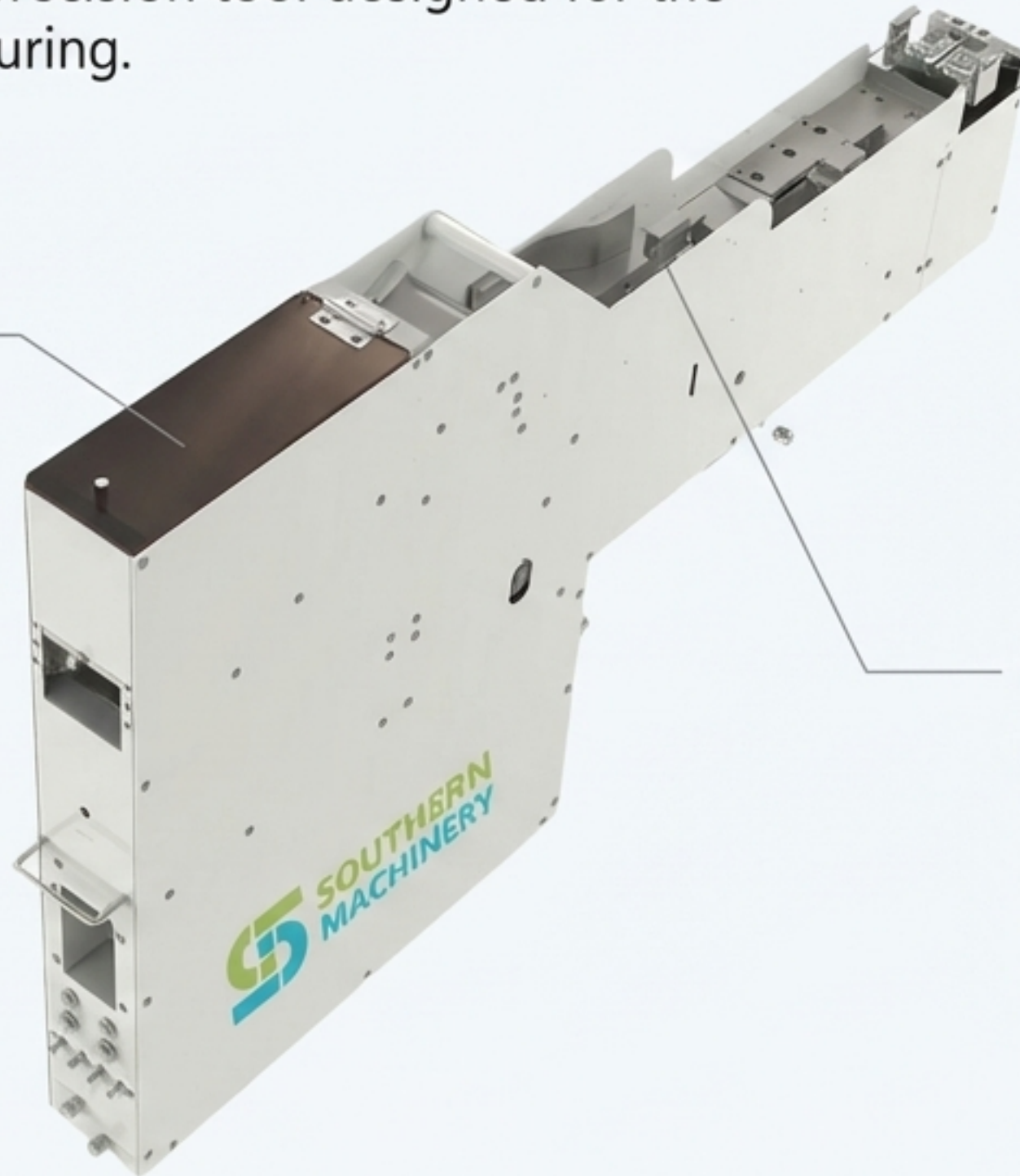
-  **High Cost:** Requires custom-machined bowls and expensive tape/tray packaging.
-  **Inflexibility:** Weeks of lead time and heavy re-tooling for New Product Introduction (NPI).
-  **Component Damage:** 'Aggressive resonance' causes pin bending fatigue, abrasive wear, and internal damage to delicate parts.
-  **Large Footprint:** Consumes valuable cleanroom floor space (often 0.5-0.8 m<sup>2</sup>).

# Our Answer: The S-MVF01 Reciprocating Belt Feeder

Engineered as a direct response to the odd-form challenge, the S-MVF01 embodies our mission. It's a precision tool designed for the realities of modern, high-mix manufacturing.

## Brand Value: Compact

Revolutionary **1/39th the volume** of a traditional bowl feeder, weighing only **12kg**. Reclaim your valuable floor space and increase feeder density.

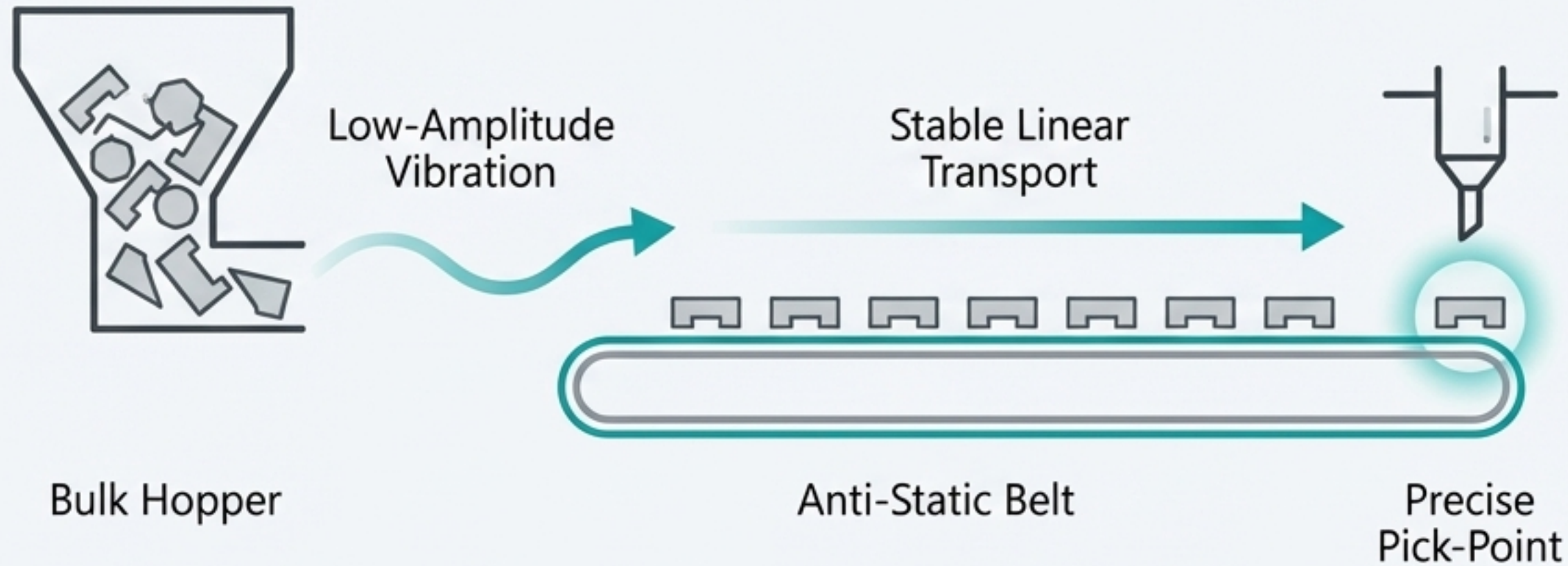


## Brand Value: Efficient

Gentle, linear belt transport synchronizes perfectly with your placement machine's **1.5-2.0s cycle time** for zero-wait-state performance.

# From Chaotic Bulk to Precision Placement

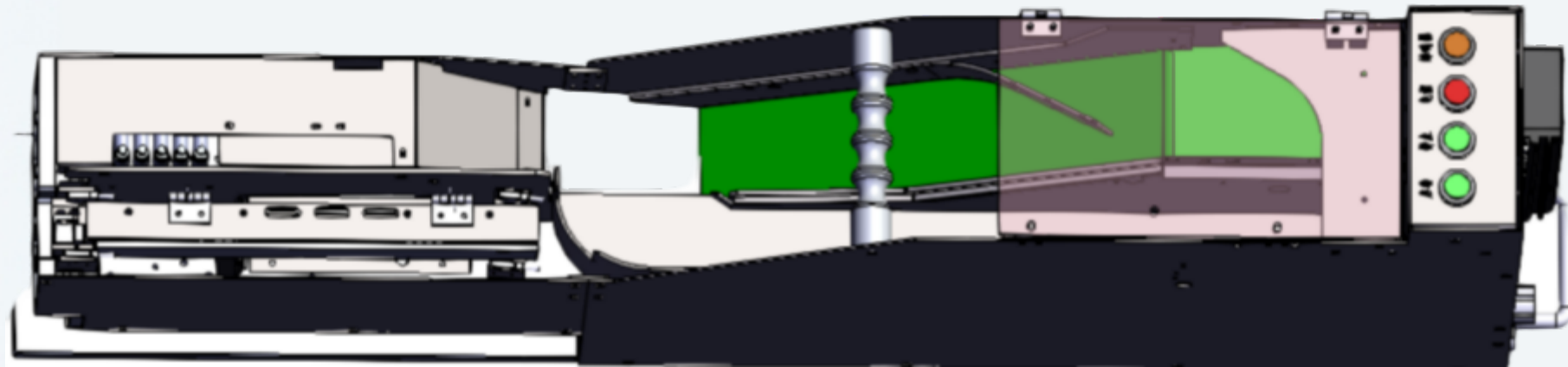
The S-MVF01 transforms low-cost bulk components into perfectly presented parts using a 'Low-Energy' transport method that protects their integrity and your yield.



- **1. Gentle Loading:** Low-amplitude vibration prevents the abrasive wear and structural fatigue common in bowl feeders.
- **2. Stable Transport:** The anti-static reciprocating belt keeps the component's center of gravity stable, eliminating pin damage.
- **3. Precision Stop:** The part arrives at the pick-point undamaged and ready for acquisition, ensuring a near-zero internal damage rate.

# Our Technical Moat: Unshakeable Reliability & Precision

Our 'Innovation Leadership' is demonstrated through best-in-class components and intelligent process control.



## Technology Teal

### Mitsubishi PLC Control

The industry-standard for robust, 24/7 automation. Guarantees stable performance and simple, reliable 24V I/O communication with any host machine.

## Technology Teal

### Fiber Optic Sensing + Linear Delay

A high-resolution fiber optic sensor detects the component's leading edge. The PLC then applies a user-programmable time delay, allowing the belt to move the component's center perfectly to the pick-point coordinates with  $\pm 1\text{mm}$  precision. This is the key to our flexibility.

# Customer Value Part 1: Radical Cost Reduction

Unlock massive savings by switching from packaged components to bulk.



Cost Category	Tape & Reel / Bowl Feeder	S-MVF01 Bulk Feeding
Packaging Premium	High (\$0.02 - \$0.20 per part)	<b>Zero</b>
Labor (Splicing/Setup)	High & Error-Prone	<b>Minimal</b> (On-the-fly refill)
Waste Management	Significant Disposal Costs	<b>None</b>
CAPEX Flexibility	Sunken Cost" (Single-use)	<b>Modular Asset</b> (Multi-use)

## ROI Snapshot

For a factory using 2 million odd-form parts annually, a conservative \$0.02/part saving yields **\$40,000 in annual savings**. The S-MVF01 often pays for itself in under 6 months.

# Customer Value Part 2: Unmatched Operational Agility

Transform a major production bottleneck into a flexible, strategic asset for the NPI race.



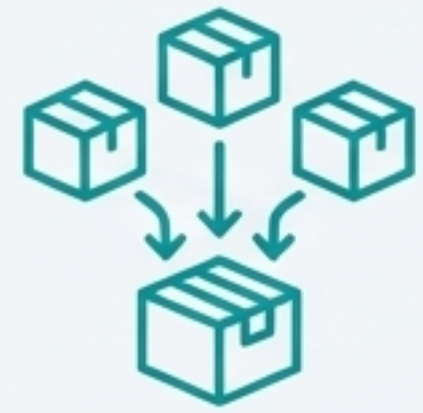
## Rapid Changeover

The adjustable rail system reconfigures for components from **3x3mm to 20x20mm** in minutes, reducing setup time by up to **80%** compared to custom bowl feeders.



## Higher OEE

Eliminating tape splicing and custom tooling jams means significantly less downtime and higher Overall Equipment Effectiveness.

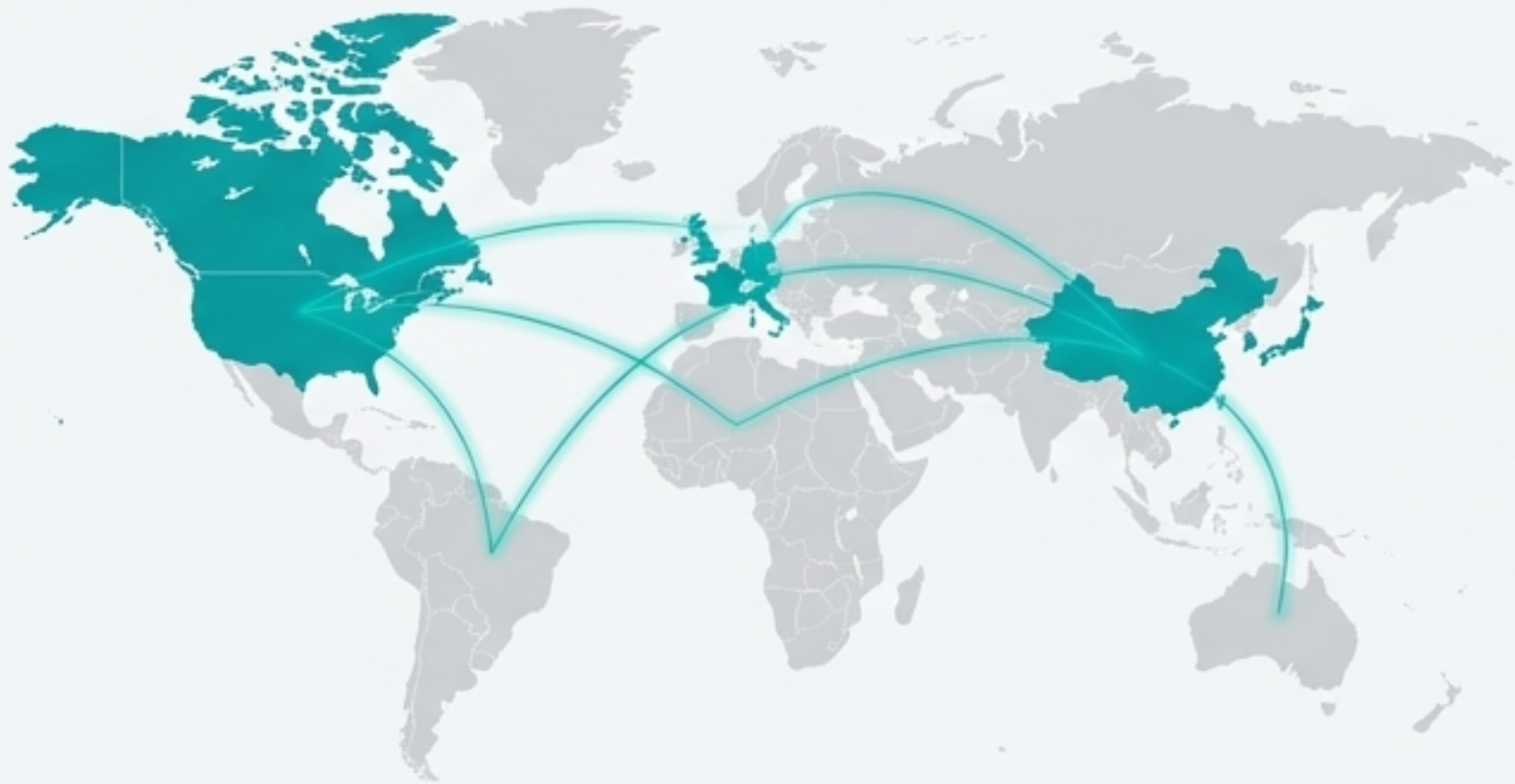


## Simplified Inventory

Standardize your feeding on one flexible platform, reducing the complexity of managing dozens of component-specific feeders.

# Our Commitment: A Global Partner at Your Side

Our brand promise extends beyond the machine. We provide the global service infrastructure to ensure your lines are always running.



## Our Global Service Promise



**Rapid Technical Response:** Expert engineers available to diagnose and resolve issues.



**Worldwide Spare Parts:** A global logistics network ensures critical parts are available when you need them.



**Comprehensive Documentation & Training:** Empowering your teams to operate and maintain equipment for peak performance.



# Seamless Integration, Universal Compatibility

The S-MVF01 is engineered to be brand-agnostic, breaking vendor lock-in and standardizing your odd-form automation.

A standard **24V I/O interface** and modular mounting plates ensure flawless integration with your existing infrastructure.

## Trusted with Major Platforms

**Panasonic**



**YAMAHA**

**JUKI**

**FUJI**

**ASM**   
**SIEMENS**

 **Mirae**

# S-MVF01: Your Shortcut to a Smarter Factory

The S-MVF01 is more than a feeder; it is a strategic step toward the lean, flexible, and data-driven principles of Industry 4.0.



**Dramatically Lower Costs**  
(Eliminates packaging)



**Radically Increased Agility**  
(Fast NPI changeover)



**Higher Production Yield**  
(Gentle, precise handling)




**Seamless Integration**  
(Universal compatibility)




# Optimize Your PCB Assembly Line Today

Contact our sales engineering team to discuss your specific manufacturing challenges and configure a tailored automation solution.

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