



INVARIANCE AUTOMATION



Engineered in India.
Built for Precision

Desktop SMD Pick and Place Machine (INVSMT-2E)

Bring Industrial SMT Production to Your Desktop

The **INVSMT-2E** offers Dual-Head speed, Vision accuracy, and Closed-Loop reliability—perfect for High-Mix Manufacturing and R&D.

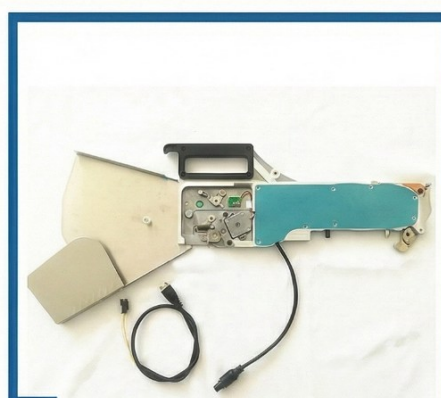


Production Never Stops with Local Support

Don't risk your deadlines on imported machines with no service backup. We provide Expert On-Site Installation and In-Person Training at your facility. With spare parts available domestically and a 1-Year Warranty honored in India, help is always just a phone call away not a time zone away.

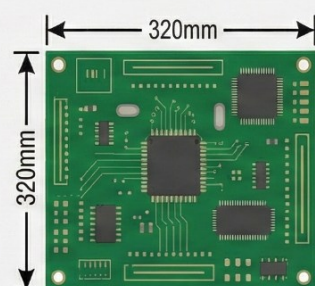


- **Guaranteed Precision (No Lost Steps)** Powered by Closed-Loop Step-Servo Motors with encoders. Unlike standard steppers, our system corrects position in real-time to ensure $\pm 0.025\text{mm}$ accuracy for fine-pitch components (0402 to QFNs).
- **High-Speed Dual Production** Double your throughput with Dual Placement Heads running at 3,000 CPH. Includes Top & Bottom HD Vision cameras to auto-align every component on the fly.



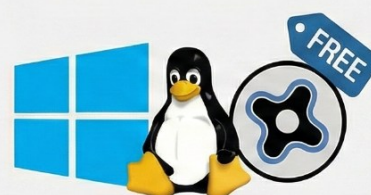
1

FEEDER CAPACITY:
Machine Support for
up to 24 Yamaha
Auto Feeders +
IC Trays.



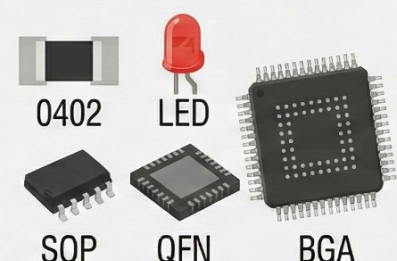
2

MAX PCB SIZE:
Large 320mm $\times$
 $\times$ 320mm
working area.



3

SOFTWARE:
No Licensing Fees.
Compatible with
Windows/Linux &
OpenPnP.



4

**COMPONENT
RANGE:**
Handles 0402, LED,
SOP, QFN, QFN,
and BGAs.

Automate your assembly line and stop manual prototyping. Contact us today: Call/WhatsApp: +91-70000 60479, +91-77558 39309. Visit:
www.invariance.co.in, [Youtube](#), Location: IIT Kanpur (Nankari), Uttar Pradesh

Precision You Can Trust. Software You Can Master.

Eliminate production errors with Closed-Loop control and intelligent Open Source software.

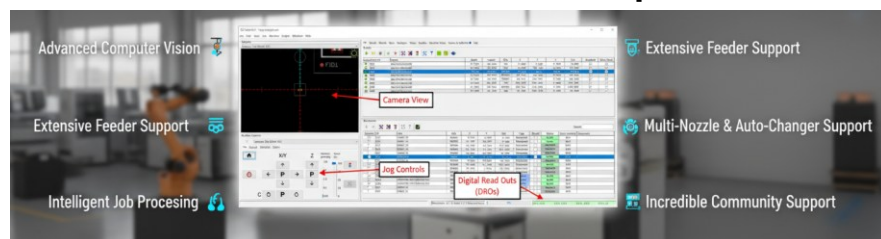
Zero-Error Motion Control



Standard desktop machines use open-loop steppers that can 'slip' and ruin expensive PCBs. The INV-SMT-2E uses Closed-Loop Step-Servo Motors with high-resolution encoders.

- **Real-Time Feedback:** The system instantly detects and corrects any position deviation.
- **Result:** 100% reliable placement for fine-pitch components like QFNs and BGAs, even during long production runs.

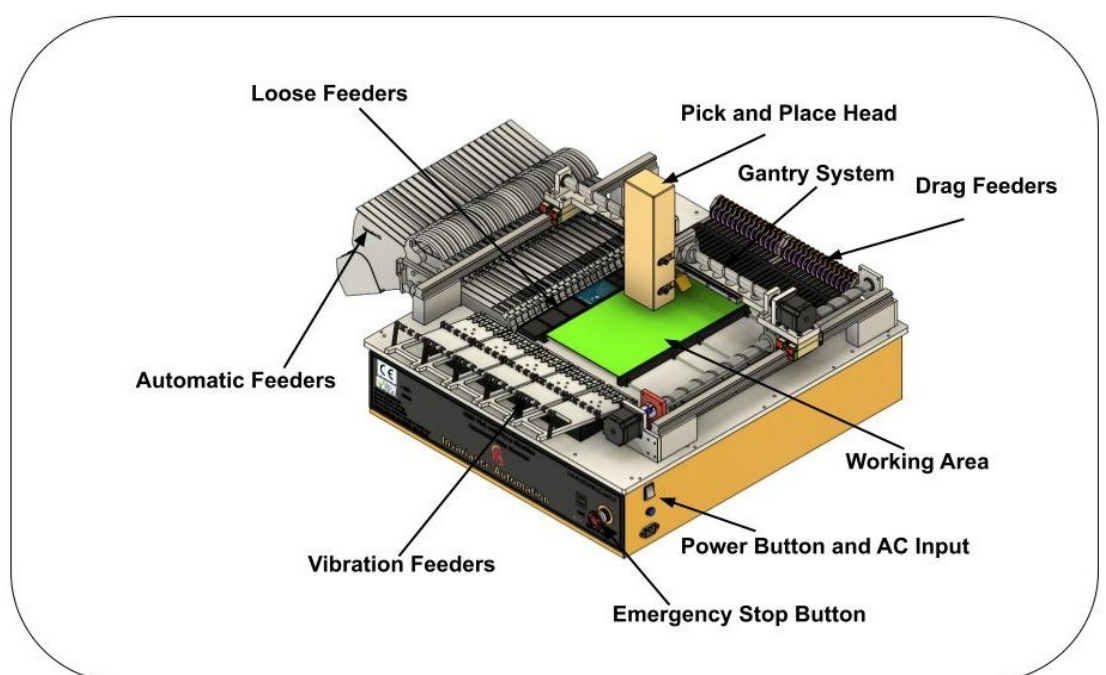
Powerful Software. Zero Subscription Fees



Don't rely on mechanical alignment alone. Our Up & Down HD Camera System ensures every part is inspected before placement.

- **Wide Component Range:** Handle everything from tiny 0402 passives to large 5050 LEDs and SOPs with precision.
- **Auto-Correction:** The machine automatically detects component angle and offset, adjusting the placement head on the fly.

Design to Board in Minutes: Simply import your CAD data (Pick and Place file). The software optimizes the path for maximum speed. **Lifetime Free License:** No dongles, no annual renewals, and a massive global support community. **Python-Powered Flexibility:** Advanced users can customize operations using Python scripts for specialized tasks.



Whether you are doing R&D or batch production, our flexible feeder system adapts to your needs.

- Support of up to 24x Automatic Yamaha CL Feeders: For your high-volume reels (8mm, 12mm, 16mm, 24mm).
- 20x Auto-Drag Feeders: Perfect for cut-tape components and prototyping—no expensive feeders required.
- Vibration & Tray Feeders: Dedicated zones for tube-packaged chips and loose ICs.

Automate your assembly line and stop manual prototyping. Contact us today: Call/WhatsApp: +91-70000 60479, +91-77558 39309. Visit: www.invariance.co.in, [Youtube](#), Location: IIT Kanpur (Nankari), Uttar Pradesh

Feature	Specification	Feature	Specification
MODEL/Variant	INVSMT-2E / Desktop SMD Pick and Place Machine	Motor control	Step-Servo Motor with Encoder Closed-loop Control
XYZ Axis Travel	425mm(X), 490mm(Y), 25mm(Z)	Main board	HAL 32-bit Industry Motherboard
PCB Max Size	400mm(L) x 400mm(W)	Operation system	Windows/Linux Operating System
Mounting Speed	Without vision: 3000 CPH; With Vision: 2500 CPH	Screen	Need External Monitor VGA/HDMI capable
Support Components	0402-5050, LED, SOP, QFN etc.	Air source	> 8 Bar Pressure 1-3 HP Compressor
Precision	±0.025mm	Rated Power	0.6KW
Placement Head	2 Heads. Maximize throughput, reduce assembly time.	Rated Voltage	AC 220V±10% 50Hz
Feeding system	Support up to 24 Yamaha Auto feeders, IC Tray Feeder, 20 Auto-drag Feeders, 2 Vibration feeders	Gross Weight	90kg
Vision detection	Top and Bottom HD Camera (Up & Down)	Dimension	800mm(L)×780mm(W)×400mm(H)

INVSMT-PNP Software

Precision. Powered by Python.

Smart Vision for Placement

Intuitive Job & Component Management

Python-Based Control

www.invarance.in
Call +91-7755839309

Unleash Your SMT Potential

Customized SMD Pick Place Machines For Every Application

- LED Manufacturing
- Research and Development
- SMD Tubelight Controlller Manufacturing
- & More! As per Your Need

Call +91-7000060479 to discuss SMD solutions for your need

Unmatched Support Ecosystem

Chinese imports leave you guessing. We provide a complete support package:

- **Expert On-Site Installation:** A certified engineer sets up and calibrates your machine at your facility.
- **Complimentary Training:** Full-day hands-on training for your operators to ensure productivity from Day 1.
- **1-Year Warranty:** Comprehensive coverage on parts and labor.

Versatility for Every Electronic Business

LED & Lighting Manufacturing

High-speed placement for LED Drivers, MCPCBs, and Tube Light Controllers. Handle large batches effortlessly.

Research & Development (R&D)

Perfect for labs and design houses. Rapidly prototype complex boards without waiting for external assembly vendors.

Custom Industrial Solutions

Need a specific modification? As the manufacturer, we offer Customized SMT Solutions tailored to your specific production requirements.

Automate your assembly line and stop manual prototyping. Contact us today: Call/WhatsApp: +91-70000 60479, +91-77558 39309. Visit: www.invariance.co.in, [Youtube](#), Location: IIT Kanpur (Nankari), Uttar Pradesh

World-Class Standards. Indian Engineering.
ISO 9001:2015 Certified Manufacturing & Dedicated Local Support.

We don't cut corners. Invariance Automation Pvt. Ltd. is a fully certified manufacturer complying with global ISO 9001:2015 quality standards and CE Machinery Directives. You get industrial-grade safety and reliability, verified by third-party audits.



**MANAGEMENT SYSTEM
CERTIFICATE**

This is to certify that

INVARIANCE AUTOMATION PVT LTD
369, CHANDEL GATE, NANKARI, IIT KANPUR, KALYANPUR, KANPUR NAGAR - 208016,
UTTAR PRADESH, INDIA

has been assessed by RAPL and found to comply with the requirements of

ISO 9001 : 2015
Quality Management Systems

For the following activities:

PROVIDING SOLUTIONS FOR SURFACE-MOUNT ELECTRONIC COMPONENT ASSEMBLY LINES
THROUGH THE MANUFACTURING OF SMT PICK-AND-PLACE MACHINES, SMT
AUTOMATED OPTICAL INSPECTION (AOI) SYSTEMS AND SMT
SEMI-AUTOMATIC SOLDER-PASTE PRINTERS.

Certificate Number: E20250522870
Date of certification: 08/05/2025
1st Surveillance on or before: 07/05/2026
IInd Surveillance on or before: 07/05/2027
Certification Valid Until: 07/05/2028







Director (Certification)
Royal Assessments Pvt. Ltd.
623 A, Tower-B, IThum, Plot No. A-40, Sector - 62, Noida - 201301, India.
www.royalapl.com, info@royalapl.com
Phone : +91 120 4251329
This Certificate can be verified at www.iafcertsearch.org

This Certificate is an endorsement of certified clients certification status but remains the property of Royal Assessments Pvt. Ltd. Certificate must be returned on RAPL's request or if certificate is withdrawn. Validity of certificate is subject to successful completion of surveillance audits. RAPL is accredited by EGAC, Egypt. EGAC is member of International Accreditation Forum (IAF) and signatory of MLA.



Scan this code with your smart phone to verify the certificate



Paramount Quality Certifications

Certificate of Compliance

CE

This is to certify that the technical documentation/inspection/test results comply with the requirement of Machinery Directives: 2006/42/EC, 2014 / 32/EC manufactured by:

NAME: INVARIANCE AUTOMATION PRIVATE LIMITED
ADDRESS: 369, CHANDEL GATE, NANKARI, IIT KANPUR, KALYANPUR, KANPUR, KANPUR NAGAR, UTTAR PRADESH, 208016, INDIA
PRODUCTS: SMD PICK AND PLACE MACHINE, SEMI-AUTOMATIC SOLDER PASTE PRINTER, AUTOMATED OPTICAL INSPECTION MACHINE
MODELS: INVSMT2E, INVSMT2P, INVSMT-1SSP, INVSMT-1AOI

COMPLIES WITH THE REQUIREMENTS APPLICABLE TO IT
The Certification Body has performed an independent audit of the above product quality system covering the design, manufacture and final inspection of the certified product. The quality system has been assessed, approved and is subject to continuous surveillance according to the Machinery Directives : 2006/42/EC , 2014 / 32/EC.

THIS CERTIFICATE IS ISSUED UNDER THE FOLLOWING CONDITIONS:

1. It applies only to the quality system maintained in the manufacture of above referenced models and it does not substitute the design or type-examination procedure, if requested.
2. The certificate remains valid until the manufacturing conditions or the quality system are changed.
3. The certificate validity is conditioned by positive results or surveillance audits.
4. After fulfilling the relevant EU legislation, the manufacturer shall affix to each device, of the above referenced model.
5. The CE mark as shown above can be used, under the responsibility of the manufacturer, after completion of an EC Declaration of conformity and compliance with all relevant EC Directives. The statement is based on a single evaluation of one sample of above mentioned product. It does not imply an assessment of the whole production.

Certification Calendar:

Client Id: 50341	
Certificate No: CU-53477/0525	
Initial Registered Date: 08.05.2025	Issuance Date: 08.05.2025
Date of Expiry: 07.05.2028	
1 st Surv. Due: 07.05.2026	2 nd Surv. Due: 07.05.2027




Authorized Signatory

Validity of this certificate is subject to annual surveillance audits to be done successfully on or before 365 days from date of this certificate. This certificate remains the property of PQC & shall be returned immediately upon request. Email:- info@pqcrt.in, www.pqcrt.in



Chintu Gurbani
WhatsApp contact



Partner with the Future of Electronics Manufacturing in India. Invariance Automation is revolutionizing the SMT landscape with "Swadeshi" innovation and global standards. Based at IIT Kanpur, we design machines that blend industrial robustness with cutting-edge software. We are looking for partners to expand our reach in the consumer electronics, automotive, and LED manufacturing sectors.



READY TO AUTOMATE YOUR PRODUCTION?

Get a quote, schedule a demo, or or discuss your custom SMT needs.

CONTACT SALES & SUPPORT

Mobile: +91-70000 60479 /
+91-77558 39309

Email: contact@invariance.in,
automationinvariance@gmail.com

FACTORY & EXPERIENCE CENTER

Invariance Automation Pvt. Ltd.
369, Chandel Gate, Nankari, IIT Kanpur Area, Kalyanpur,
Kanpur Nagar - 208016, UP, India.

WEB

Website: www.invariance.co.in

Automate your assembly line and stop manual prototyping. Contact us today: Call/WhatsApp: +91-70000 60479, +91-77558 39309. Visit: www.invariance.co.in, [Youtube](#), Location: IIT Kanpur (Nankari), Uttar Pradesh