ASMPT enabling the digital world

SIPLACE TX micron

High-speed and high accuracy for submodules and SiPs

FASTER AND MORE ACCURATE
SIPLACE TX micron

A MILESTONE FOR ADVANCED PACKAGING AND HIGH-DENSITY APPLICATIONS

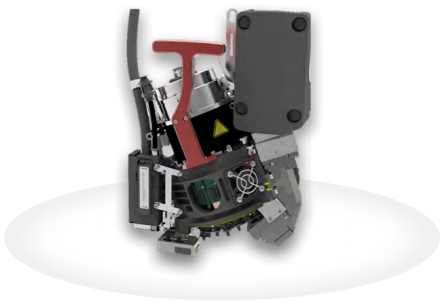
With the SIPLACE TX micron, you run advanced packaging and high-density applications with the performance of state-of-the-art SMT technology (up to 93,000 cph) and unprecedented accuracy. A standard accuracy of 20 µm @ 3 sigma and accuracy classes of 15 and 10 µm @ 3 sigma allow to reliably mount placement gaps of as little as 50 µm. The performance and upgradeability of the SIPLACE TX micron protect your investment.

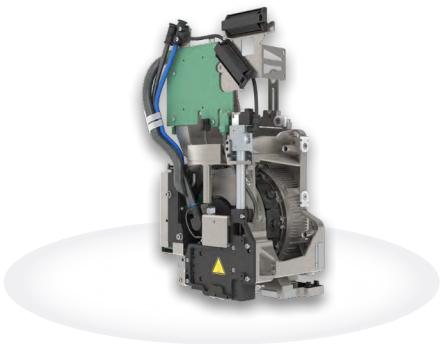
With smart features such as the new high-resolution PCB camera, flexible transport options of the new Multi Purpose Dual Conveyor, non-stop feeding of components into JEDEC trays by the SIPLACE Tray Unit, open interface standards and powerful control software, the SIPLACE TX micron guarantees maximum yield and maximum productivity in the intelligent factory at all times.

TWO
PLACEMENT HEADS

HIGHLY ACCURATE AND ULTRA-FLEXIBLE

The entire placement process can be programmed in detail for each component and placement position – including touchless pickup and zero-force placement.





Placement Head CP20

- Component spectrum: 0201 metric to 8.2 mm × 8.2 mm × 4 mm
- For the most sensitive components: Thin dies with heights up to 50 µm (minimum height)
- Extremely fast: Up to 46,500 cph
- Extremely accurate: Up to ±10 µm @ 3 σ

Placement Head CPP

- Switches from pick-and-place to collect-and-place to mixed mode based on software commands
- Component spectrum: 0402 metric to 27 × 27 mm x 6 mm
- High speed: Up to 23,850 cph
- Extremely accurate: Up to ±20 µm @ 3 σ

MAXIMUM
FLEXIBILITY

PERFECT: SUPPLY AND TRANSPORTATION

- Robust, intelligent and maintenance-free Smart Feeders, Glue Feeder X, Force Verification Feeder and Linear Dipping Unit 2 X
- **NEW: Multi Purpose Dual Conveyor** PCB transport up to a thickness of 14 mm incl. warpage. JEDEC trays, J-Boat carriers, carriers with high locating pins or “thick” carriers can be transported. The clamping and release speed of the conveyor is programmable.

FOR SENSITIVE COMPONENTS:
MAXIMUM ACCURACY

For sensitive components

Individually programmable placement process with touchless pickup and zero-force placement and individual tracking from the tape to the finished product

Die crack/die chipping detection

For minimal dpm rates: The vision system recognizes even the finest component damage and hairline cracks without slowdowns.

Vision system with blue and red light

High-contrast images of even the smallest components (01005, 0201m) and differentiation of special characteristics (copper pillars)

Maximum performance

With its two gantries and innovative placement modes, the SIPLACE TX micron reaches speeds of up to 93,000 cph.

Flux detection/inspection

Optical control ensures high yields when using dipping units.

Cleanroom certification

Class 7 certification as per DIN EN ISO 14644-1 and SEMI S2/S8.

- **SIPLACE Tray Unit**
  Fast and non-stop component supply via JEDEC trays in compact cabinet

MANY INNOVATIONS:
ACCURACY BY DESIGN

PERFECT INTERACTION

With its many innovations, the SIPLACE TX micron overcomes traditional placement accuracy limitations. Its perfect interaction of temperature-resistant scales made of glass ceramics, fiducials, high-resolution optical sensors and vacuum toolings ensures extremely accurate placement while delivering maximum performance. Combined with the new SIPLACE CA2 in a SMT line, active components from the wafer and passive components from tape-and-reel can be placed automatically. By eliminating taping, splicing or refilling, process effort and manual faults are reduced and costs are saved.

More about
SIPLACE TX micron

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Speed (benchmark rating)	Up to 93,000 cph	
Placement accuracy (3 σ)	Up to 10 µm	Up to 20 µm
PCB dimensions (L x W)	50 mm × 45 mm to 375 mm × 460 mm (single-lane mode) 50 mm × 45 mm to 375 mm × 260 mm (dual-lane mode) 50 mm × 45 mm to 590 mm × 460 mm (long board option) 50 mm × 55 mm to 300 mm × 240 mm (with vacuum transportation / 15 µm) 50 mm × 55 mm to 250 mm × 100 mm (with vacuum transportation / 10 µm)	
Machine dimensions (L x W x H)	1.00 m × 2.23 m × 1.45 m	
Component supply	Up to 80 8-mm feeders, JEDEC Trays, Linear Dipping Unit, Glue Feeder, SIPLACE Tray Unit, 3rd party feeder integration, JTF-ML2	
Power consumption (avg.)	2.0 kW for SIPLACE TX2i micron with CP20 (1.2 kW for SIPLACE TX2 micron with CPP)	
Air consumption	120 Nl/min (2 x Placement Head CP20)	
Certifications	SEMI S2/S8, Clean Room Class ISO 7	
Data interfaces	IPC-HERMES-9852, IPC-2591 CFX, IPC-SMEMA-9851	

Placement Heads	CP20	CPP
Speed (benchmark rating)	Up to 46,500 cph	Up to 23,850 cph
Component spectrum	up to 8.2 × 8.2 mm*	up to 27 × 27 mm**
Min. lead pitch	70/50* µm	120 µm
Min. lead width	30/25* µm	50 µm
Min. ball pitch	100/50* µm	140 µm
Min. ball diameter	50/25* µm	70 µm

* With optional high-resolution camera (SST49) with blue light / ** With optional high-resolution camera (SST30)

YOUR TECHNOLOGY PARTNER FOR **ADVANCED PACKAGING**

Advanced packaging, one of today's key technologies in electronics production, blurs the lines between semiconductor production/OSATs, IDMs, and demanding SMT applications. In times of rising time, cost and efficiency pressures, the production of SiPs and SoCs as well as the processing of dies and flip-chip modules on high-precision SMT platforms is becoming more common every day. With the SIPLACE TX micron you can use the performance of state-of-the-art SMT technologies in advanced packaging and high-density applications to replace significantly less efficient bonding solutions. As the world's largest supplier to the electronics industry, ASMPT serves the backend segment for semiconductor manufacturers and OSATs as well as classic SMT production facilities. The development of the new SIPLACE TX micron was based on decades of experience and the latest technologies from both fields to raise advanced packaging and high-density applications to a new level of productivity.

ASMPT

ASMPT GmbH & Co. KG
Rupert-Mayer-Strasse 48 | 81379 Munich | Germany | Phone: +49 89 20800-22000 | Email: smt-solutions.de@asmpt.com

asmpt.com | smt.asmpt.com

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