

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 96,000 cph) and unprecedented precision. Three precision classes in a single machine: 25, 20 and 15 μm @ 3 σ with placement pitches of as little as 50 μm . The performance and up-gradeability of the SIPLACE TX micron protect your investment.

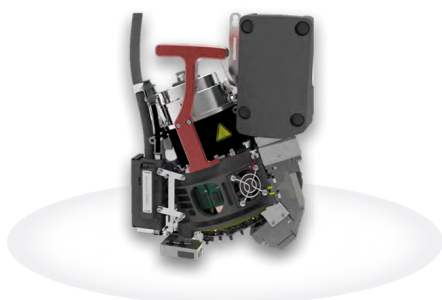
With smart features such as the non-stop supply of components in JEDEC trays with the SIPLACE Tray Unit, open interface standards and powerful control software, the SIPLACE TX micron fits seamlessly into the modular, flexible and manufacturer-independent Open Automation concept, guaranteeing maximum productivity and yields in the Integrated Smart Factory at all times.

TWO PLACEMENT HEADS

HIGHLY PRECISE AND ULTRA-FLEXIBLE

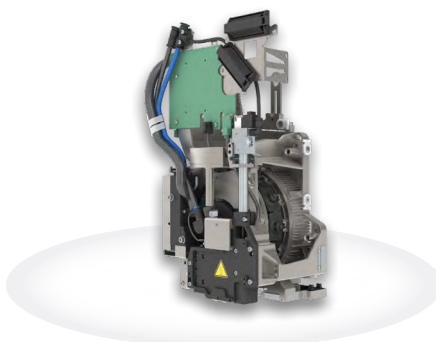
The entire placement process can be programmed in detail for each component and placement position – including touchless pickup and zero-force placement.

OPEN AUTOMATION



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 48,000 cph
- Extremely precise: Up to $\pm 15 \mu\text{m}$ @ 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 × 6 mm
- High speed: Up to 23,850 cph
- Extremely precise: Up to $\pm 20 \mu\text{m}$ @ 3 σ

SMART FEEDING SOLUTIONS

PERFECT COMPONENT SUPPLY

- Robust, intelligent and maintenance-free Smart Feeders, Glue Feeder X, Force Verification Feeder and Linear Dipping Unit 2 x
- **NEW** SIPLACE Tray Unit: Fast and non-stop component supply via JEDEC trays in compact cabinet

FOR SENSITIVE COMPONENTS: MAXIMUM PRECISION



For sensitive components

Individually programmable placement process with touchless pickup and zero-force placement



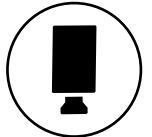
Die crack/die chipping detection

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



Vision system with blue light

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



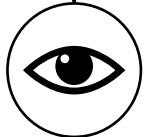
Maximum performance

With its two gantries and innovative placement modes, the SIPLACE TX micron reaches speeds of up to 96,000 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.



TIONS

MANY INNOVATIONS: ACCURACY BY DESIGN



NEW

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 innovative vacuum toolings ensures extremely precise positioning while delivering maximum performance. Your gain: Maximum accuracy, quality and productivity even for extremely small components and the tightest component pitches.

More about
SIPLACE TX micron



SIPLACE TX micron

SIPLACE TX micron		
Speed (benchmark rating)	Up to 96,000 cph	
Placement accuracy (3 σ)	Up to 15 μm	Up to 20 μm
PCB dimensions (L x W)	50 mm x 55 mm to 250 x 100 mm	50 mm x 45 mm to 375 x 260 mm (dual-lane mode) 50 mm x 45 mm to 375 x 460 mm (single-lane mode) 50 mm x 45 mm bis 550mm x 460 mm (long board option)
Machine dimensions (L x W x H)	1.00 m x 2.23 m x 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	
Power consumption (avg.)	2.0 kW for SIPLACE TX2i micron with CP20 (1.2 kW for SIPLACE TX2 micron with CPP)	
Air consumption	120 NI/min (2 x Placement Head CP20)	
Certifications	SEMI S2/S8, Clean Room Class ISO 7	
Data interfaces	IPC-HERMES-9852, IPC-CFX, IPC-SMEMA-9851	
Placement Heads	CP20	CPP
Speed (benchmark rating)	Up to 48,000 cph	Up to 23,850 cph
Component spectrum	up to 8.2 x 8.2 mm*	up to 27 x 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

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