europlacer
HIGH MIX PRODUCTIVITY

ii-A1

The Compact Flexible Mounter

integrated INTELLIGENCE

atom range

ii-RC Software

▶ A simple and easy-to-use interface

▶ Ergonomic and intuitive operation

Embedded Camera

▶ Hi-Res camera on Tornado head

▶ Down to 03015m

0.3mm
0.15mm

Intelligent Conveyor

▶ Increase productivity without mechanical stops

▶ Automatically optimizes board stop position for maximum productivity
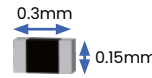
The Compact Flexible Mounter

While the ii-A1 can operate in stand-alone mode, offering many of the benefits of the innovative atom platform technology, its real value comes when used as a module in line with other Europlacer machines. Featuring a single Tornado turret head with eight or twelve nozzles, the ii-A1 delivers Europlacer's legendary flexibility. A broad range of components can be handled by the turret heads along with 162 feeder positions and two different types of internal matrix trays. The matrix trays offer up to 5 Jedex capacity so there is a lot of potential in the small footprint of the ii-A1.

When using the ii-A1 to boost your production line, it can be configured for specific SMT assembly duties or as a fully featured module offering placement speeds up to 15,390cph. The ii-A1 is ultra flexible, compact and designed to drive your productivity.
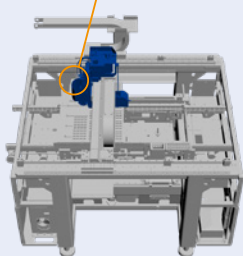
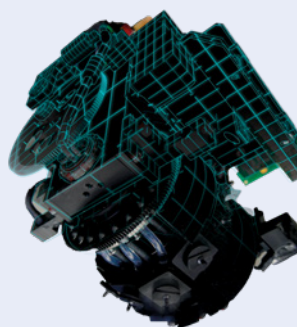|	
Flexibility	▶ ▶ ▶ ▶ ▶
Feeder capacity	▶ ▶ ▶
Speed	▶ ▶

IPC CFX™

Smart Nozzles

▶ Reduced set-up time

▶ Nozzle type identifier

▶ Nozzles can be placed anywhere

1 Tornado Head

- 8 or 12 nozzles
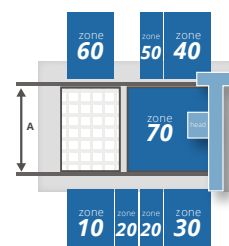- Speed 15,390 CPH*
- Components up to 99 x 99 x 34mm**

ii-Tab

- Mobility solution
- 10 Software applications
- Support for Setup, Stock Management and Production

Loading Capacity

- Configurable zones - ii-Feed trolleys (ii-Cart), tape feeder or special feeder
- Central Jedec tray support for large components

ii-Cart Intelligent Trolley

- Up to x33 8mm ii-Feed elements
- Accepts any mix of 8, 12, 16 or 24mm tapes

NT Feeder

- From 4mm to 104mm width
- Component height up to 26.5mm

Machine compatible with all feeders in the Europlacer range, see Feeders brochure

* With 12 nozzle position - Optimum test conditions in factory

** With 8-nozzle Tornado head, matrix tray distributor with fewer shims, or auto tray loader with specific tray support

Options

Fixed Camera

Allowing the placement of large components up to 99 x 99 x 34mm **

Special Nozzles Magazines

Can hold 4 special nozzles:

- ▶ Vacuum or gripper nozzles
- ▶ Heavy and large components

Dispensing System

- ▶ Glue or paste dispensing
- ▶ 2 different systems: air or auger valve

Electrical Test

- ▶ Passive RLC and Zener diode testing
- ▶ Hameg tester from Rhode & Schwarz
- ▶ Diode polarity check

Recommended Accessories

Freeform Feeder

- ▶ Tray for unpackaged, bulk components
- ▶ Identify components regardless of their position

Short Tape Tray

- ▶ Ideal for short tapes 8, 12, 16 and 24mm
- ▶ Fiducially aligned for accurate pick up across the whole length of tape

Belt Feeder

- ▶ Solution for components supplied in stick format
- ▶ SO, SO medium, SO large and TSSOP type components

Traceability Option With Label Feeder

- ▶ Dispensing 1D and 2D labels
- ▶ Sticker size from 4 x 8mm to 55 x 55mm
- ▶ Add serial number data to traceability option

Benefits

Flexibility

▶ **Component range**:

From 03015m
up to 99 x 99 x 34mm**

▶ **Feeder capacity:**

162 x 8mm feeders
5 Jedec central tray

Connectivity

▶ **ii-Tab:**

Connect your Pick and Place machine to our mobile solution to help you prepare and monitor your production line.

▶ **CFX 1.7 compatible:**

Easily connect the ii-A1 with all CFX compatible equipment in your production line.

Versatility

▶ **PCB range:**
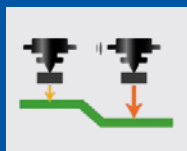
From 60 x 45mm
to 1070 x 715mm and 10kg

All-In-One Solution

▶ **Standalone:**

Complete Pick and Place installation with only one machine.
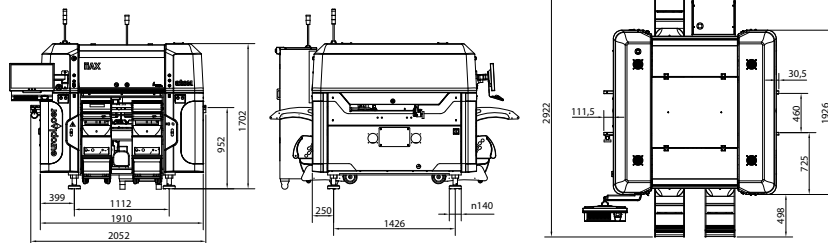
Features

3DPS

Real-time Z axis adjustment to compensate for any board warpage. No PCB support tooling pin needed.

AAS

Auto Adaptive Sequencing defines placement priorities and rules to avoid collision. It takes into account component and nozzle shapes, characteristics of the PCB and the trajectory of the heads.

** With 8-nozzle Tornado head, matrix tray distributor with fewer shims, or auto tray loader with specific tray support

Technical Specification

General

Electrical	400V/210V three phase 50Hz/60Hz, 8kVA
Air	7 bar, 30l/min
Noise	<70dB (A)
Working temperature	18°C to 30°C
Humidity	20% to 80% RH non-condensing
Weight	1800 kg (without feeders and packaging)

Tornado Head Specifications

Technology		Turret
Nozzle position		8 or 12
Placement speed	Max	8 nozzles: 13 650 Cph (takt time)
		12 nozzles: 15 390 Cph (takt time)
Placement accuracy	Chips	46 µm @3σ Cpk ≥ 1.0
	QFP	22 µm @3σ Cpk ≥ 1.0
Component range	Minimum size	0.3mm x 0.15mm (03015m)
	Maximum size	50mm x 50mm as standard; 99mm x 99mm with fixed camera option (more on demand)
	Maximum height	Full revolution of turret 12mm 8 nozzles: 1 component mode 34mm** 12 nozzles: 1 component mode 31mm*
	Type	Chips, MELFs, electrolytic capacitors, SO, PLCC, QFP, TSOP, QFN, BGA, µBGA, LGA, CSP, connectors, Flip chip, through hole and odd-form devices
	Min lead pitch	0.2 mm (QFP) / 0.3 mm (µBGA) 0.1 mm (QFP) / 0.15 mm (µBGA) with optional fixed camera for turret
	Min lead/ball size	0.1 mm (QFP) / 0.15 mm (µBGA) 0.05 mm (QFP) / 0.075 mm (µBGA) with optional fixed camera for turret

ii-A1 Specifications

		Standard	Options
Configuration		1 Tornado Head 1 x Independant X/Y linear gantry	
'Smart' nozzle tool banks		1 x 60 positions in front	1 x additional special tool bank (for odd form) 1 x 40 positions in front
Component analysis		1 x 'On-the-fly' high resolution digital camera	1 x fixed camera
Feeders	Capacity	162 x 8mm tape feeder position + matrix trays for equivalent of 4 or 5 Jedec	
	Range	Full range of Europlacer intelligent feeders for 4mm to 104mm tapes, plastic sticks, wide range of matrix trays feeders, sequencer, short tape feeders, bulk feeders, fluxer, label feeder, solder ball feeder	
Board handling	Minimum PCB size	60 mm x 45 mm	
	Max length	1070mm	
	Max width	510 mm as standard / 715 mm (without feeder at rear)	
	Thickness	0.5 mm to 10.0 mm	
	Max weight	3 Kg / (10 Kg as an option)	
	Board clearance	Under clearance: 25mm	
		Edge clearance: 3mm	
	Board location	Full edge clamping with fiducial correction	
	Conveyor type	Patented intelligent tracking system: without mechanical stopper, fully flexible, real-time status, contributes to throughput optimization	
	Transport criteria	Left to right, fixed front rail, height-adjustable 890mm to 975mm, SMEMA interface	

* With 12 nozzle position - Optimum test conditions in factory
** With 8-nozzle Tornado head, matrix tray distributor with fewer shims, or auto tray loader with specific tray support

Options

- ▶ Fixed upward looking camera for larger and very fine pitch components on Turret head
- ▶ Electrical component testing
- ▶ Glue dispenser
- ▶ Heavy PCB kit for conveyor (10 kgs)

- ▶ Wide PCB kit 715mm (with no feeder at the rear)
- ▶ Internal tray holder zone 427mm x 490mm – 4 Jedec tray equivalent, max. PCB length 620mm

- ▶ Internal tray holder zone 587mm x 490mm – 5 Jedec tray equivalent, max. PCB length 460mm

As part of our policy of continuous development, specifications are subject to change without notice.