europlacer
HIGH MIX PRODUCTIVITY

ii-N1

Best In Class For Prototyping

integrated INTELLIGENCE

iineo range

ii-RC Software

► A simple and easy-to-use interface

► Ergonomic and intuitive operation

Embedded Camera

► Hi-Res camera on Tornado head
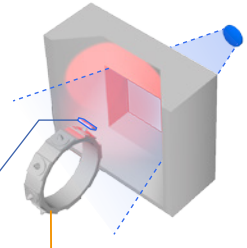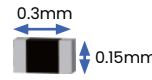
► Down to 03015m

0.3mm

0.15mm

Intelligent Conveyor

► Increase productivity without mechanical stops

► Automatically optimizes board stop position for maximum productivity

Short Tape Tray

► 8, 12, 16 and 24mm trays available

► Virtual feeder up to 30 components

► Fiducial aligned

Best In Class For Prototyping

With the ii-N1 in your production line, you never have to say no. The platform is built on Europlacer's unique multi core processing technology which is designed to deal with all surface mount assembly demands, without compromise.

With the introduction of the elegant ii-N1 machine, you will increase productivity and deliver premium performance for any assembly application.

Smart Nozzles

► Reduced set-up time

► Nozzle type identifier

► Nozzles can be placed anywhere

Flexibility	► ► ► ► ►
Feeder capacity	► ► ► ► ►
Speed	► ►

IPC CFX™

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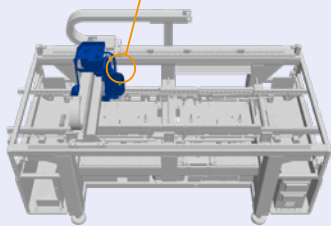
- 8 or 12 nozzles
- Speed 15,390 CPH*
- Components up to 99 x 99 x 34mm**

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

zone 80	zone 70		zone 60	zone 50
			zone 90	
zone 10	zone 20		zone 30	zone 40

Placement Zone

ii-Cart Intelligent Trolley

- Up to 33 ii-Feed elements 8mm
- Accepts any mix of 8, 12, 16 or 24mm tapes

NT Feeder

- From 4 to 104mm width
- Component height up to 26.6mm

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

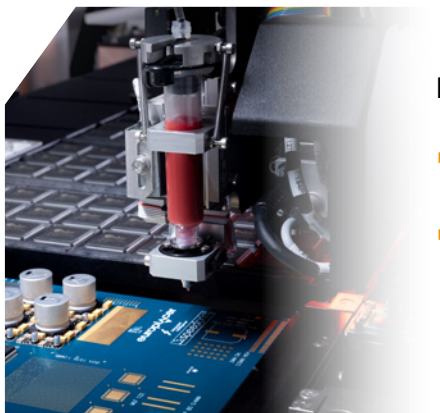* With 12 nozzle position - Optimum test conditions in factory

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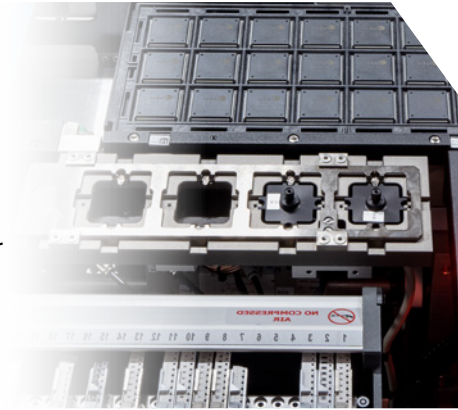
Options
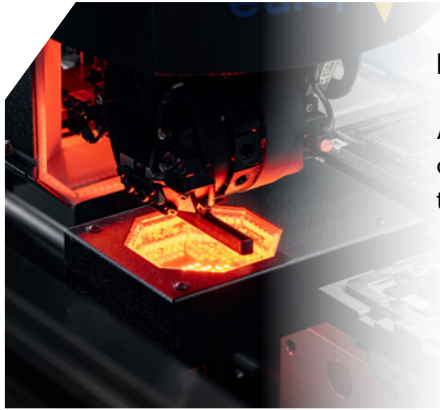
Fixed Camera

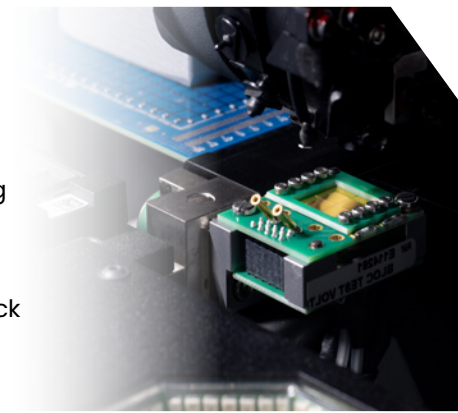Allowing the placement of large components up to 99 x 99mm

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

Matrix Tray Distributor

► Stores up to 30 trays vertically
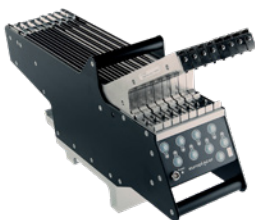
Belt Feeder

► 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

► Logging the data required for the traceability option

Benefits

Flexibility

▶ **Component range:**

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

▶ **Feeder capacity:**

264 x 8mm feeders
10 Jedec central tray

Connectivity

IPC. CFX™

▶ **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-N1 with all CFX compatible equipment in your production line.

Versatility

▶ **PCB range:**

From 60 x 45mm
to 1610 x 600mm and 10kg

All-In-One Solution

▶ **Standalone:**

Complete Pick and Place installation with only one machine.

Features

integrated INTELLIGENCE

3DPS
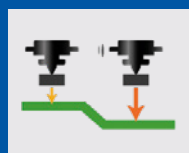
Real-time Z axis adjustment to compensate for any board warpage. No PCB support tooling pin needed.

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
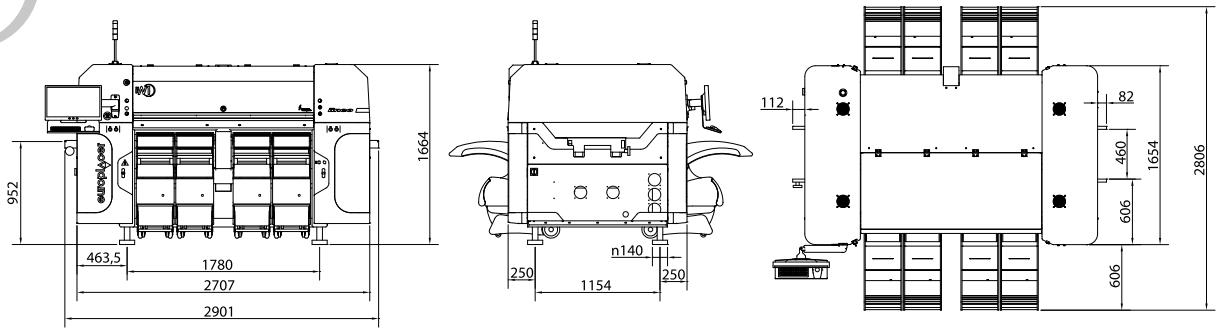
General

Electrical	400V/210V three phases 50Hz/60Hz, 5kVA
Air	7 bar, 30l/min
Noise	<70dB (A)
Working temperature	18°C to 30°C
Humidity	20% to 80% RH non-condensing
Weight	2000kg (without feeders)

Component Range

Types	Chips, MELFs, electrolytic capacitors, SO, PLCC, QFP, TSOP, QFN, BGA, µBGA, LGA, CSP, connectors, Flip chip, through hole and odd-form devices
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 ii-N1 – 1 component mode 34mm** ii-N1 – 1 component mode 31mm*
Minimum lead pitch	0.2mm (QFP), 0.3mm (µBGA) 0.1mm (QFP), 0.15mm (µBGA) with optional fixed camera
Minimum lead/ball size	0.1mm (QFP), 0.15mm (µBGA) 0.05mm (QFP), 0.075mm (µBGA) with optional fixed camera

ii-N1 Capability

Tact time	ii-N1 – 0.257 sec – 13,650cph ii-N1* – 0.234 sec – 15,390cph
Placement accuracy	22µm (QFPs) to 46µm (chips) @ 3 sigma
Placement head	1 rotary turret head on X/Y linear motor gantry ii-N1 with 8 nozzle positions ii-N1 with 12 nozzle positions
Nozzles	1 x 60 position 'smart' nozzle tool bank (20 & 40 positions as an option) (Special 4 position tool banks as an option)
Component analysis	'On-the-fly' high resolution digital camera (fixed camera as an option)
Feeder range	Full range of intelligent feeders for 4mm to 104mm tapes, components in plastic sticks and matrix trays
Feeder capacity	264 x 8mm tape feeder positions Maximum 10 Jedec matrix trays

Board Handling

Minimum PCB size	60mm x 45mm
Maximum PCB size	Length: 700mm/1070mm/1610mm Width: 460mm (600mm with option)
Thickness	0.5mm to 10.0mm
Weight	3kg max. (10kg max. as an option - Please consult us for higher valued weight)
Under board clearance	25mm
Board location	Full edge clamping with fiducial correction
Board edge clearance	3mm above, 5mm below
Transport criteria	Left to right (right to left optional), 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
- ► Feeder trolley options for bulk change of individual feeders and 'mass' tape feeder ranges
- ► 30-position automatic tray loader (sequencer)
- ► Electrical component testing
- ► Glue dispenser
- ► Additional nozzle magazines
- ► Rear operating station
- ► Internal fixed tray holder zone 1000mm x 490mm – 10 Jedec tray equivalent (550mm x 490mm – 7 Jedec tray equivalent with PCB length of 1000mm)

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

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