PICK & PLACE MACHINES

InterElectronic

INTRODUCTION

InterElectronic Hungary Ltd. offers equipments, machines and different materials (ESD) of different production technologies (SMT/THT/LED). Including high quality, special request fulfilling soldering machines, devices, tools, instruments and materials for the electronic industry and services.

SERVICES

Our each and every product has a warranty granted by the InterElectronic Hungary Ltd. For more complex appliances our company offers a well-needed training for set up and usage. We grant the repair of all of the products traded by our company during and after the warranty period. As well as we guarantee the continuous supply of accessories and instruments.

DEMONSTRATON

In case if any of our products aroused your interest the InterElectronic Hungary Ltd. would be glad to visit your company and hold a presentation of the product of your interest. As far as possible we serve you by bringing demo devices with us. In the most cases of our products we are proud possessors of references nation-wide. Major machines also could be observed at our partners' site.

PRICE LIST

Most of the prices of our products can be requested on our website and will be sent via email to you. In case of special and more complex machines the prices are given after consultation individually through a price offer. If you are interested in more information or user manuals of our products we recommend you to visit our website (www.interelectronic.com), which is updated continuously with professional information. We also recommend you to visit our office, where you can purchase any of the needed devices and spare parts of the product of your interest.

ORDER/SHIPPING

Our soon to be partners are welcomed to be helped via telephone, fax or e-mail. We use different ways of delivery, depending on the preference of our partner. We can deliver your purchased product by ourselves, by freight or courier service. The way of delivery might be negotiated previously. We offer you cash on delivery nation-wide!

TABLE OF CONTENT

Integrated IntelligenceTM is defined by the fact that the Pick&Place machines have been designed to be flexible from the outset. All aspects of the machine architecture (axis configuration, feeder inventory, turret head technology, software control, programming system, etc) have been designed to work together with intelligent feeders in a changing environment - this is truly Integrated IntelligenceTM. As a result, Europlacer Surface Mount machines release usable productivity in day-to-day performance.

EUROPLACER MACHINES

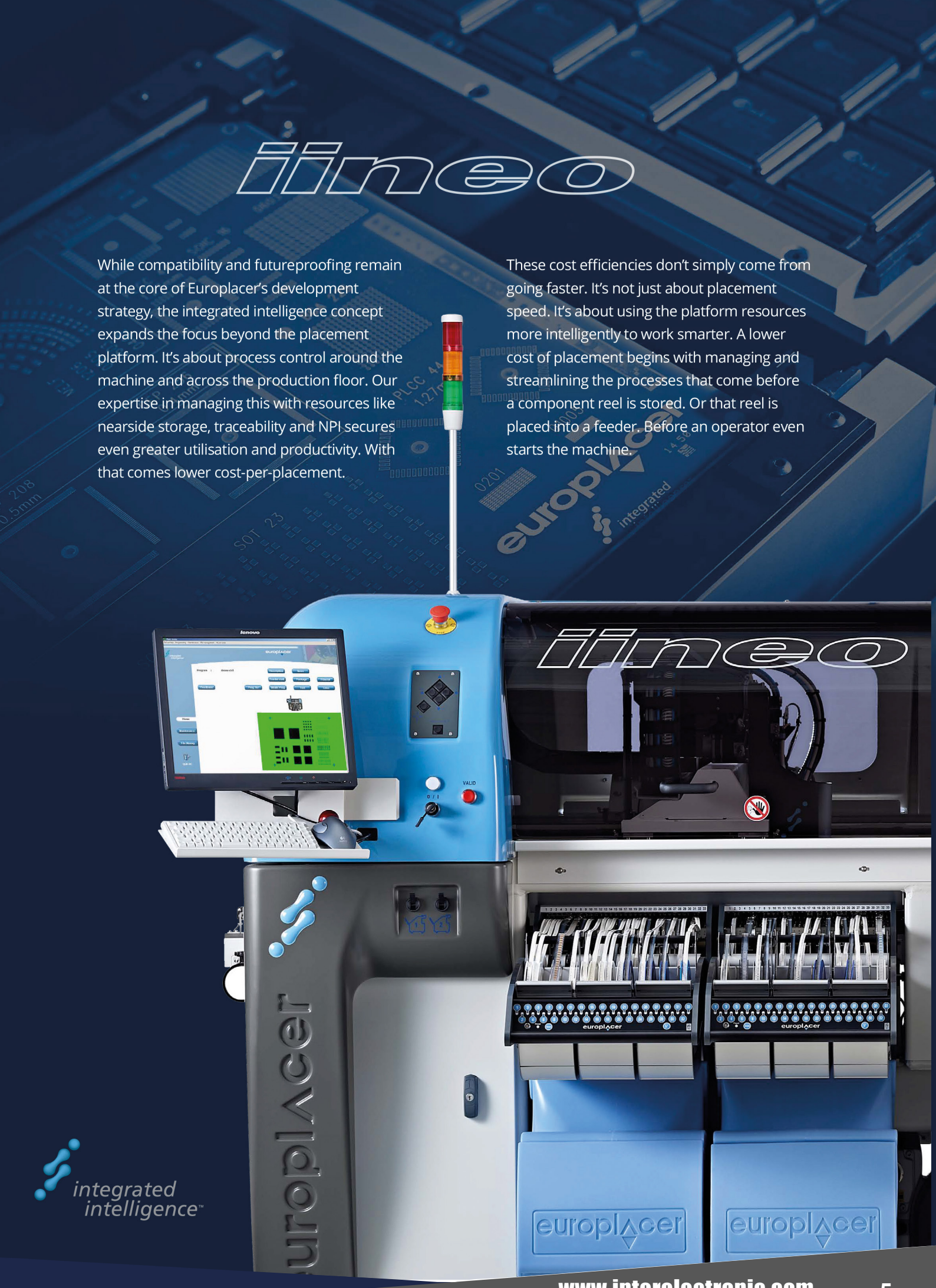
europlacer

iineo

iineo

While compatibility and futureproofing remain at the core of Europlacer's development strategy, the integrated intelligence concept expands the focus beyond the placement platform. It's about process control around the machine and across the production floor. Our expertise in managing this with resources like nearside storage, traceability and NPI secures even greater utilisation and productivity. With that comes lower cost-per-placement.

These cost efficiencies don't simply come from going faster. It's not just about placement speed. It's about using the platform resources more intelligently to work smarter. A lower cost of placement begins with managing and streamlining the processes that come before a component reel is stored. Or that reel is placed into a feeder. Before an operator even starts the machine.



integrated intelligence™

"A robust yet elegant structure that gives users everything: extremely high feeder count, the industry's largest board size, exceptional accuracy and intelligent features throughout."

CONFIGURED TO PERFORM

iineo is never having to say no. The platform takes pole position in the Europlacer product line up and is equipped as standard to remove the need to compromise. An iineo machine is a single elegant structure designed to deal with anything a modern surface mount manufacturer demands. And then you can do even more to increase the capacity of your process by adding intelligent options. That lets iineo deliver unmatched premium performance for any assembly application.

Intelligent features abound in every iineo product. In the flexible and robust turret placement heads. In the advanced on-the-fly vision. In the dispensing options. In its intelligent feeder cart compatibility. And even in the system and software tools. Integrated Intelligence is not just a slogan; it's real. And it makes a difference. Intelligence means efficiency. In turn, that drives productivity.

EXCEPTIONAL CAPACITY

Accuracy and flexibility are a given with the iineo platform. Selecting system options to meet production requirements couldn't be easier. iineo can deploy one or two turret heads. Each on its own linear motor gantry, each with integrated digital vision, and each featuring eight or twelve smart nozzles. That gives placement rates up to 30,000 cph. Feeders can be positioned to the front of the machine. Or at the rear. Or both.

iineo provides 264 positions for 8mm tapes, an internal waffle tray zone for ten JEDEC trays, plus provision for two 30-channel tray sequencers. None of which compromise the total feeder count. With such exceptional on-machine inventory, platform capacity is easy to flex across a wide range of jobs. So iineo can reduce changeovers between multiple board types and batches. It lets contract manufacturers confidently quote every job, and OEMs produce anything that R&D comes up with.

INTEGRATED INTELLIGENCE

FEEDER TECHNOLOGY

SMART OPTIONS

INVESTMENT PROTECTION

This platform will do everything you need. iineo offers exceptional capacity and high throughput that equates to unexpected value.

Europlacer's intelligent feeder technology is deployed across its entire range, including the iineo platform. So when inventory changeover is needed, it's fast and simple. A huge variety of fully programmable feeders are available, from quick-load single feeders and bulk feeders to intelligent feeder carts. As any feeder is installed, iineo automatically recognises the new component inventory.

Configuring iineo with options to suit special assembly applications is straightforward. Options include glue dispense, component electrical test, a fixed camera for large devices, auto-width conveyor, stock management, multi-program optimisation, NPI, traceability, production monitoring software, and more besides. All help to futureproof the iineo platform's capability. And that protects your investment.

OPTIONS

- Offline storage
- Barcode feeders
- Bulk feeders
- Ball feeders for BGAs
- Flux feeder
- PoP processing
- Tray sequencers
- Component testing
- Dispensers
- PROMON software
- Stock control
- Fixed camera

iineo

SPECIFICATIONS

Component range	01005 to 50mm x 50mm	Max board size	1610mm x 600mm
With fixed camera option	70mm x 70mm	**iineo I:**	1 turret head
Max component height	34mm	Max placement rate	15,390 cph
Standard feeders	8mm to 104mm tapes	IPC placement rate	12,550 cph
Standard feeders	stick, tray	**iineo II:**	2 turret heads
Special feeders	bulk, label, solder ball	Max placement rate	30,000 cph
Feeder capacity	264 positions x 8mm	IPC placement rate	24,200 cph
Internal feeders	matrix trays	Placement accuracy	35µm (QFPs) to 60µm (chips) @ 3 sigma
Placement head	8 or 12 nozzles		

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

europlacer

XPii

> Uncompromised placement performance in a compact, all-round platform suited to any surface mount application today and into the future.

SMALL FOOTPRINT

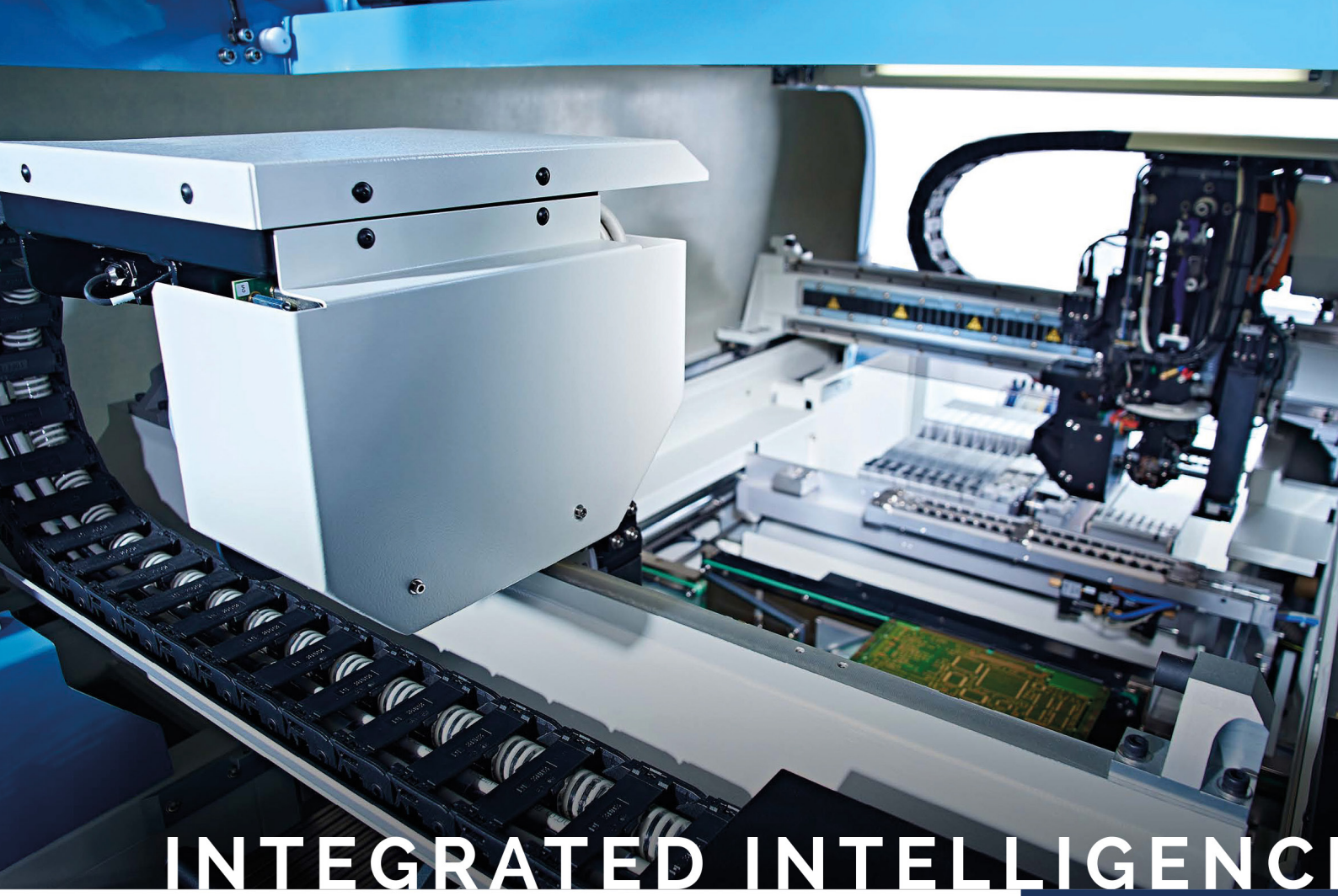
The xpii platform is designed to deliver premium performance in a small space. It's a truly inspired approach to modular pick and place. By sharing advanced technology features with Europlacer's outstanding iineo platform, xpii is able to provide the same exceptional placement rates, intelligent features and component flexibility. But it offers one distinct advantage where space is a consideration, thanks to its compact form factor.

Few small, modular placement platforms offer this extreme level of flexibility. xpii places every type of component, giving it the largest component range in its class. As a standalone placement system, xpii is ideal in high-mix product environments manufacturing medium and large batches. All within minimal floor space. The advantages of Europlacer integrated intelligence make short work of machine set up and product changeover to maximise productivity.

BIG PERFORMANCE

As part of a placement line solution, the xpii can be invaluable. Existing Europlacer users can deploy an xpii machine to boost capacity and add unprecedented flexibility. For example, when positioned in line with an iineo platform, the xpii can operate as a direct iineo extension. By balancing the program across the two machines, the line essentially functions as an iineo with up to four heads and a huge feeder capacity.

For new Europlacer users, xpii offers a superior level of component flexibility and an impressive turn of speed. Throughput for the twin head xpii platform configuration is 30,000 components per hour. And all with intelligent feeder technology that dramatically reduces derated pick and place performance, allowing reels and trays sequencers to be positioned at any feeder location to the front and rear of the machine.



INTEGRATED INTELLIGENC

COMPONENT RANGE

SMART OPTIONS

FUTURE COMPATIBILITY

Compact dimensions sometimes conceal gigantic capabilities. The extreme flexibility of the xpii platform is a perfect example.

xpii puts no restrictions on component range or placement sequence. Equipped with up to 92 feeders, the platform can place any component on any of its turret head nozzles. Europlacer's smart nozzle technology is the key to this exceptional flexibility. Intelligent on-the-fly vision addresses devices from 01005 to 50mm square, while an optional fixed camera handles components up to 70mm square.

Like its larger sibling, xpii can be configured with options to suit special assembly applications. Options include component electrical test, auto-width conveyor, stock management, multi-program optimisation, NPI, and production monitoring software. All add to the high levels of utilisation as a standalone platform or an inline solution to boost capacity and capability.

OPTIONS

- Offline storage
- Barcode feeders
- Bulk feeders
- Ball feeders for BGAs
- Flux feeder
- PoP processing
- Tray sequencers
- Component testing
- PROMON software
- Stock control
- Fixed camera

XPii

SPECIFICATIONS

Component range	01005 to 50mm x 50mm	Max board size	500mm x 460mm
With fixed camera option	70mm x 70mm	**xpii I:**	1 turret head
component height	32.5mm	Max placement rate	15,390 cph
Standard feeders	8mm to 104mm tapes	IPC placement rate	12,550 cph
Standard feeders	stick, tray	**xpii II:**	2 turret heads
Special feeders	bulk, label, solder ball	Max placement rate	30,000 cph
Feeder capacity	92 positions x 8mm	IPC placement rate	22,380 cph
Internal feeders	matrix trays	Placement accuracy	35µm (QFP's) @ 3 sigma 60µm (Chips) @ 3 Sigma
Placement head	8 or 12 nozzles		

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

europlacer

iico

"As an affordable entry point into surface mount placement technology, the iico platform is unbeatable. This much capability is rarely found in low cost solutions."

RE-ENGINEERING

With its time-proven platform and inventive upcycling strategy, iico addresses the vast majority of components and package types used by today's electronics manufacturers. By carefully dismantling end-of-life legacy machines, Europlacer engineers repurpose the robust platform parts and add the latest technology.

The result is a highly accurate placement system that incorporates a new turret head, optical sensors, vision technology, feeder interfaces and latest generation operating software to offer performance at a price in a class of its own. As well as its green credentials, iico delivers outstanding value for money.

iico

INTEGRATED INTELLIGENCE

COMPONENT RANGE

FEEDER TECHNOLOGY

SMART NOZZLES

iico is ideal for small and medium businesses, and dedicated prototype operations, where a rapid ROI is imperative.

Through innovative re-engineering, iico customers enjoy all the benefits of a contemporary placement platform at a fraction of the cost. While upcycling enables the entry-level price point, new technologies safeguard productivity. All critical mechanical assemblies are replaced. iico systems feature new motors and new linear encoders for outstanding positional accuracy.

iico machines are compatible with all Europlacer feeder technologies, including intelligent feeder carts and 3DPS. Smart nozzles place every type of component – from 0201 to 50mm square. That means unrestricted utilisation of the turret head, no placement sequence limitations, and no throughput compromise. A capacity of 198 reels with placement rates above 9,000 cph make iico a capable up-to-date placement solution.

COMPONENT TYPES

- Chips
- MELFs
- SO
- PLCC
- QFP
- QFN
- TSOP
- BGA
- uBGA
- LGA
- CSP
- Connectors
- Odd-form SMDs
- Electrolytic capacitors
- 0201 to 50mm x 50mm

iico

SPECIFICATIONS

Component Range	0201 to 50mm x 50mm	Internal feeders	matrix trays
Max component height	24mm	Placement head	8 nozzles
Standard feeders	8mm to 104mm tapes	Max board size	500mm x 460mm
Standard feeders	stick, tray	Max placement rate	9,100 cph
Special feeders	bulk, label, solder ball	IPC placement rate	7,750 cp
Feeder capacity	198 positions x 8mm	Placement accuracy	40µm (QFPs) to 60µm (chips) @ 3 sigma

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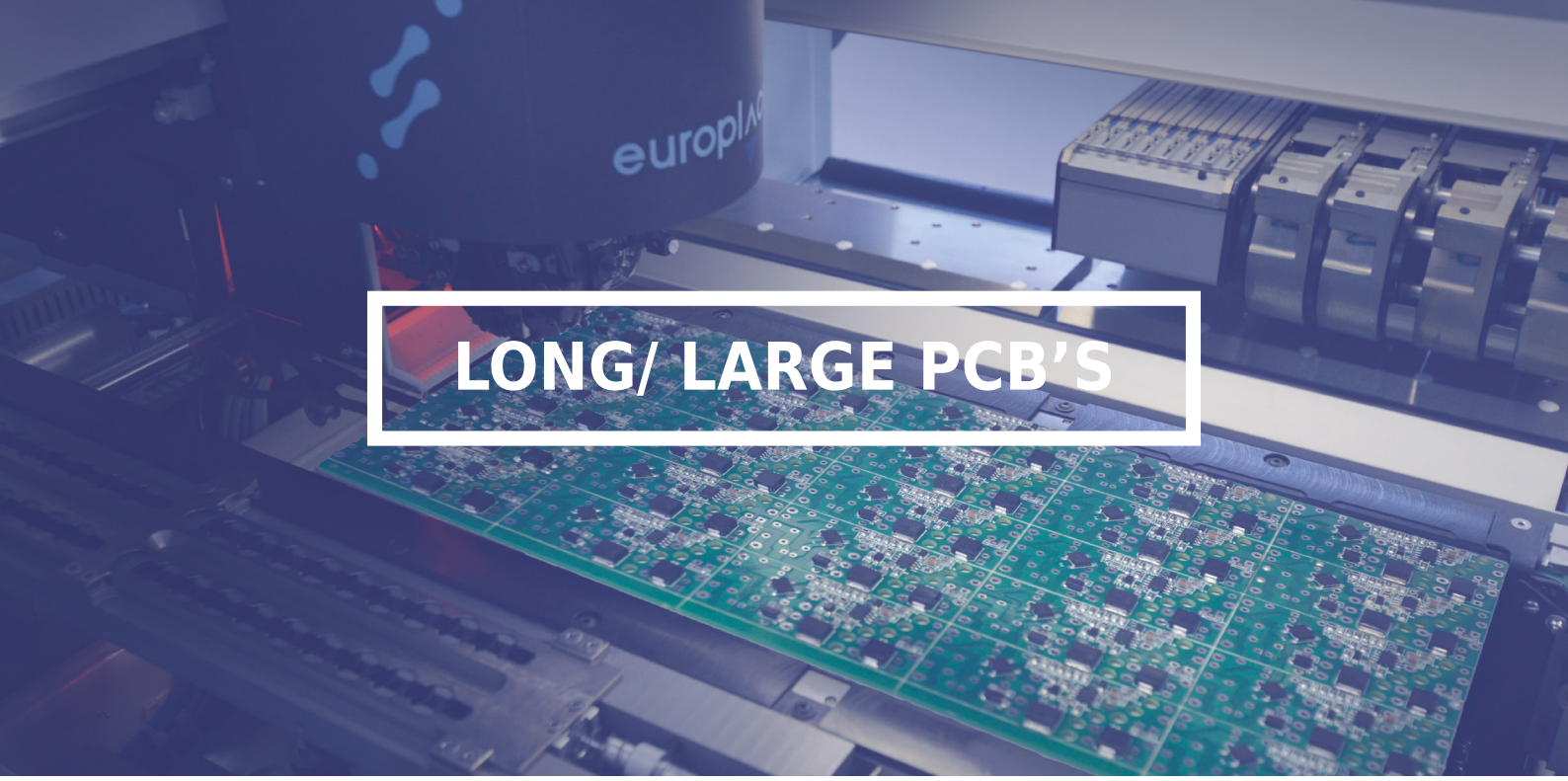


LONG/ LARGE PCB'S

LARGE BOARDS

If large boards are your thing, then iineo is for you!

The incredible flexibility of the **iineo** platform allows you to configure the internal conveyor within the the machine and produce any PCB up to 1610mm x 600mm in size, while still maintaining all the standard features that **iineo** provides.

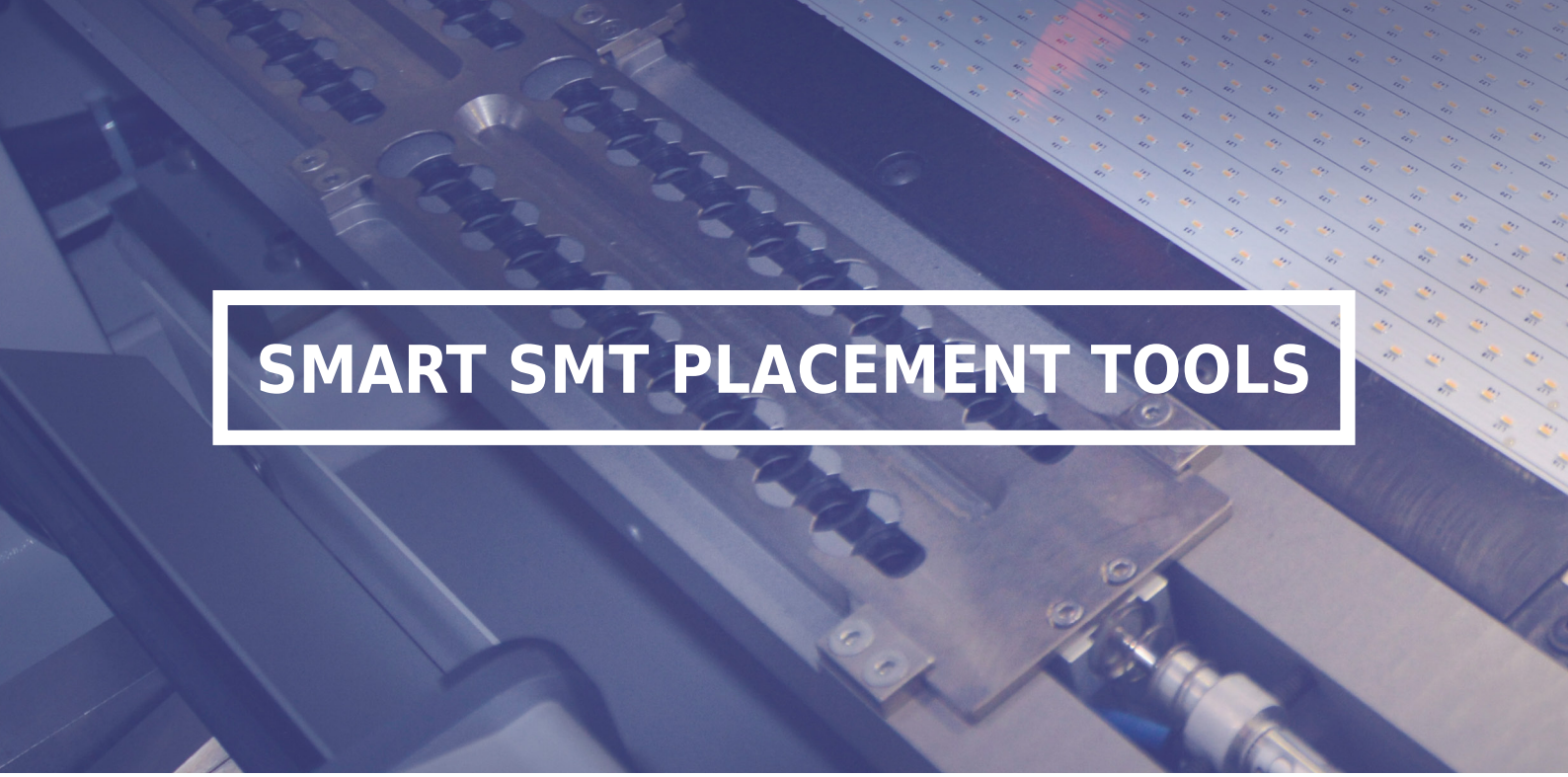
Having the largest board capability in the industry provides users with a solution to applications such as LED panel and LED strip production. Now you can manufacture panels in one shot, without needing to move the PCB in steps within the machine. It reduces process risks within the production operation.

If your PCBs are less than 460mm wide, you still maintain the full 264 x 8mm feeder positions. Where PCBs greater than 460mm need to be accommodated, you still get an impressive 132 feeders positions.

Follow this link for a practical testimonial of LED placement on a large board with Ledpower.

Available on the following machines

iineo



SMART SMT PLACEMENT TOOLS

NOZZLES

SMART NOZZLES

The majority of nozzles available in the market are of an expensive steel construction with vacuum pickup.

Europlacer uses **Smart nozzles** constructed from thermo plastics to significantly reduce replacement cost and prevent ESD on static sensitive devices.

The **Smart Nozzle** concept is simple: it has a unique identity encoded onto the nozzle that verifies that the correct nozzle is being used. **Smart nozzles** can be quickly set anywhere in the tool banks, removing all possible errors due to an operator placing a nozzle in the wrong position.

Thanks to a very powerful internal vacuum system, Europlacer machines reduce operational costs by handling the majority of SMT devices with a small range of smart nozzles,

Where vacuum is not appropriate, and devices require special handling, Europlacer offers a range of adjustable gripper nozzles. And we can design special nozzles around customers' specific applications for any odd form components.

Available on the following machines

iineo **xpii** **iico**

II-FEED SMD INTELLIGENT FEEDER

II-FEED

INTELLIGENT FEEDER II-FEED

ii-Feed is based on the strengths of Europlacer's proven concept of a cart plus elements but incorporates key aspects of our individual feeder technology, merging the best of both technologies.

Each individual **ii-Feed** element is fully intelligent, providing the same intuitiveness as the other feeders in the Europlacer range that make the most of our integrated intelligence platform. With the full range of element sizes available, there are no limits to **ii-Feed** capabilities.

Feeder inventory investment and production complexity is kept to a minimum. There's no need to worry about how many and which type of 8mm element you may need, as our 8mm elements have no restrictions and will handle any and all your 8mm tapes.

Maintaining our philosophy of investment protection, the ii-Feed system is fully compatible across previous Europlacer machine generations. You can even use them alongside previous generations of Europlacer's tape trolleys on the same machine – and at the same time.

ii-feed cart

- Up to 33 reels 8mm
- Ready for 01005
- Accepts any mix of 8, 12, 16 or 24mm tapes

II-FEED SMD INTELLIGENT FEEDER

ii-feed elements

- Each individual element is fully intelligent
- Spool is eliminated, cover lay film is evacuated below the element
- Can be placed at any trolley location, without stopping production, guaranteeing that the correct loading plan is used
- Only one element type for all 8mm tapes, paper, plastic.

ii-feed magazines

- Reels can be prepared offline in magazines for up to 11 references
- Two types are available: 180 mm reels and 330 up to 390 mm reels
- The ii-Feed Cart can accommodate three magazines

Available on the following machines

iineo **xpii** **iico**

SMT INTELLIGENT FEEDER

NT FEEDER

SMT INTELLIGENT FEEDERS

Europlacer developed the worlds first intelligent SMT feeders back in 1993, and the philosophy continues as a thread throughout our product platform.

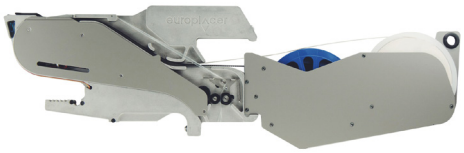
Our SMT intelligent feeders store data about the component type loaded and communicate with the machine to maximise placement efficiency and avoid faulty configuration. Capable of being programmed and replenished off-line, the feeders can be loaded at any time into any position on the machine whilst it is running. The machine will automatically recognise and optimise the production routing to accommodate the feeder.

If a program requires more component types than can be loaded on the machine during initial set-up, additional components can be prepared and introduced individually or by changing a complete feeder trolley. They can be placed anywhere on the machines, there are no dedicated slots, allowing a first time right loading plan.

Each feeder is equipped with an indicator lamp to facilitate machine control, fault finding and to indicate various states of activity. The feeder can be programmed off line via a hand held micro-terminal that can read 1D and 2D bar codes, through the offline programming station software, or directly by the machine interface.

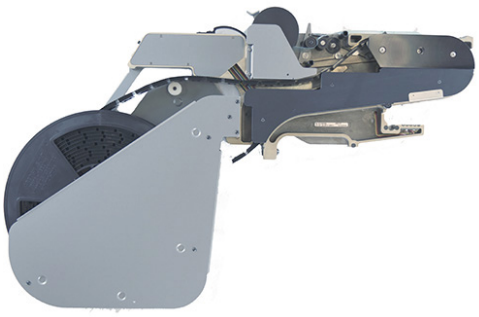
Fast and accurate calibration of the pick up position is achieved through an individual fiducial mark being present on the feeder, which is recorded when the feeder is loaded into the machine. Accuracy and flexibility of the feeder system provides a huge range of tape sizes from 8mm to 104mm and the capability to reliably place 01005 devices.

SMT INTELLIGENT FEEDER



SMT INTELLIGENT FEEDERS

- Handle all tapes no matter plastic or paper
- Fed components down to 01005 chips

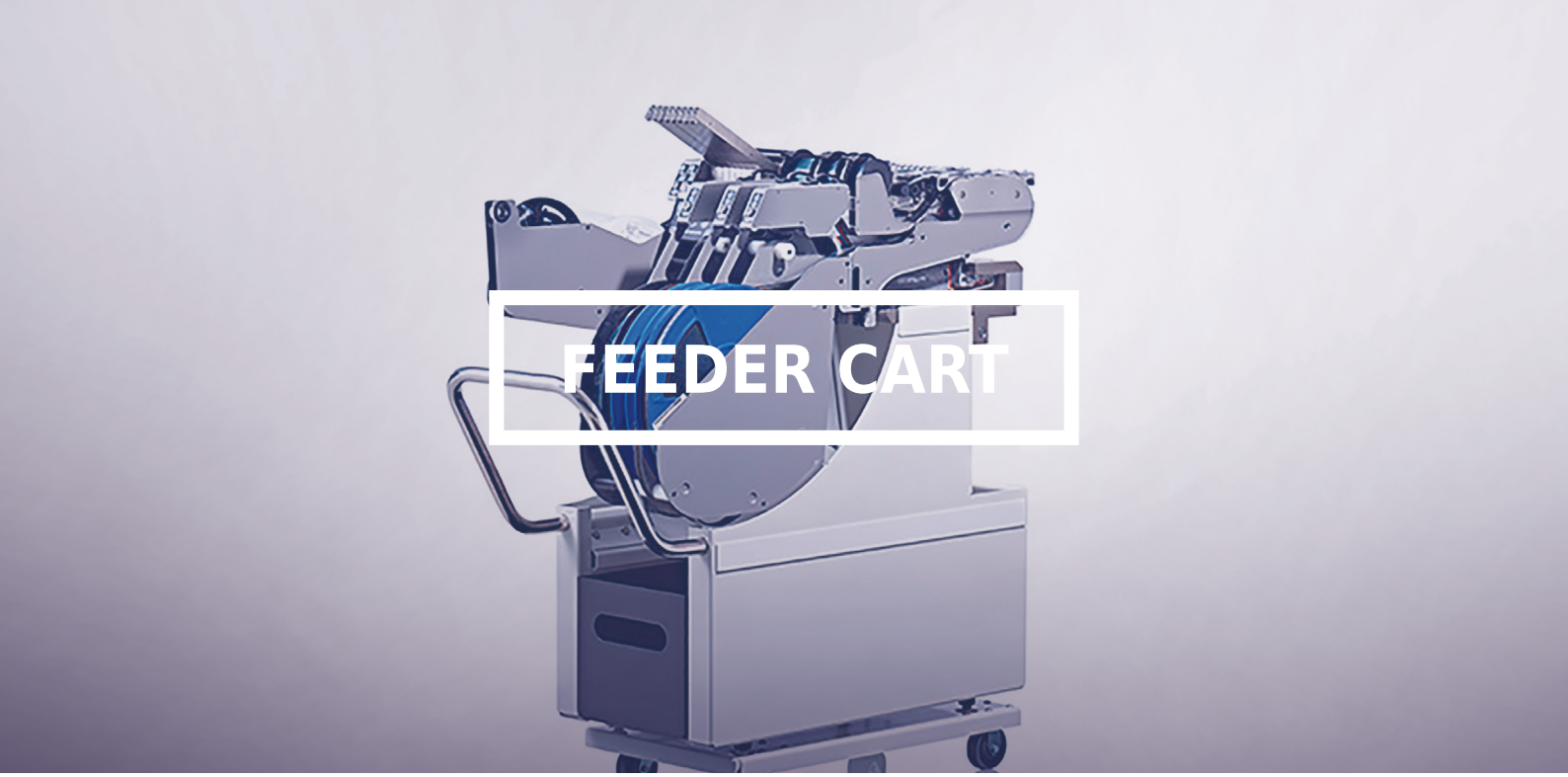


SMT INTELLIGENT FEEDERS

- Handle all tapes no matter plastic or paper
- Feeder available for tapes between 12mm and 104mm

Available on the following machines

iineo **xpii** **iico**



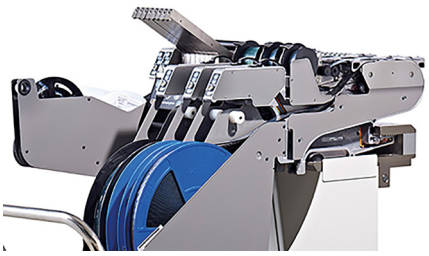
FEEDER CART

FEEDER CART

The feeder cart or feeder trolley is mobile which facilitates the block-handling of tape feeders, stick-feeders and special feeders. A part of Europlacers Integrated intelligence system, when connected outside the machine, it provides component fully integrated program and stock preparation.

Any combination of feeders can be located side by side within the cart, and carts then easily rolled up to and into any position within all Europlacer placement platforms.

An open-top drawer located in its base collects used tapes or empty sticks from the feeders, giving operators simplicity in use.

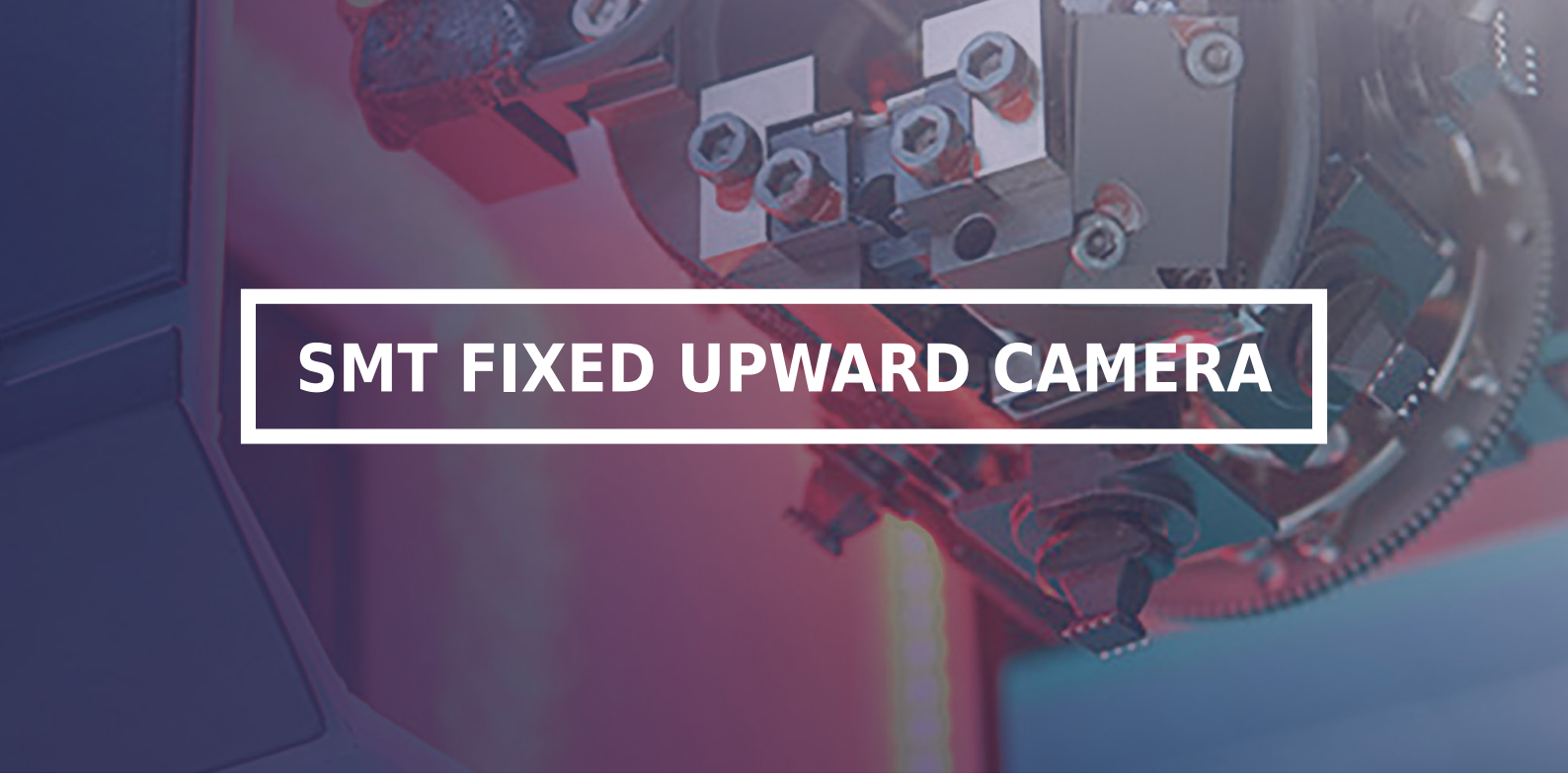


feeder cart

- allows fast changeover of feeders
- up to 16 NT feedeer 2x8mm (32 reels 8mm)
- any mix of NT tape, sticks, special feeder
- can be swapped with ii-feed cart or tray loader in seconds

Available on the following machines

iineo **xpii** **iico**



SMT FIXED UPWARD CAMERA

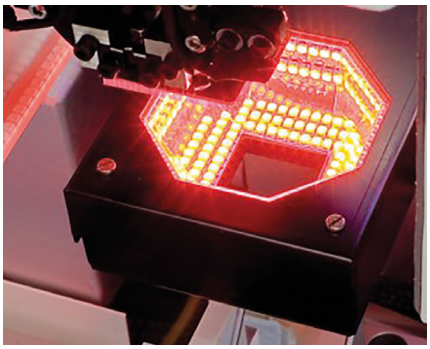
FIXED CAMERA

VISION SYSTEM

A powerful vision system is a key feature in any pick & place machine, and there are no short cuts. Europlacer developed its own vision algorithms to analyse QFPs back in the 1980s.

Europlacer is recognised as being at the forefront of vision capability, and has evolved its technology alongside some of the most challenging customer applications.

Our software algorithms combine with our own vision and lighting systems to manage the most complicated of component packages.



This high-resolution camera is used for inspection of ultra fine pitch components, µBGA, and flip chip devices. It's also used for components larger than the 50 mm x 50mm specification of the "on the fly" camera, to give accurate machine vision up to 99mm x 99mm.

It can acquire images in single field of view (SFOV) or multiple field of view (MFOV) modes. By locating it between the feeder zones on iineo, it does not reduce the maximum feeder count.

Available on the following machines

iineo **xpii**

SMT ADHESIVE / SOLDER PASTE DISPENSER

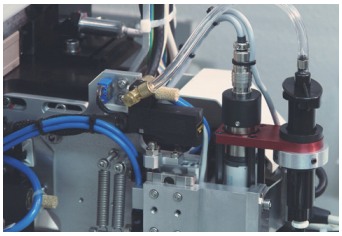
GLUE/PASTE DISPENSING

ADHESIVE / SOLDER PASTE DISPENSER

There are two types of dispenser available to you, allowing the deposition of glue or solder paste within the placement machine, and crucially, without loosing any feeder capacity or placement performance.

Mounted directly to the placement head and therefore utilising the positional accuracy and control, the dispenser provides consistent dots of glue or solder directly to the substrate prior to component placement.

Adhesive dots are generally used to hold certain passive components onto the PCB during the wave soldering process.



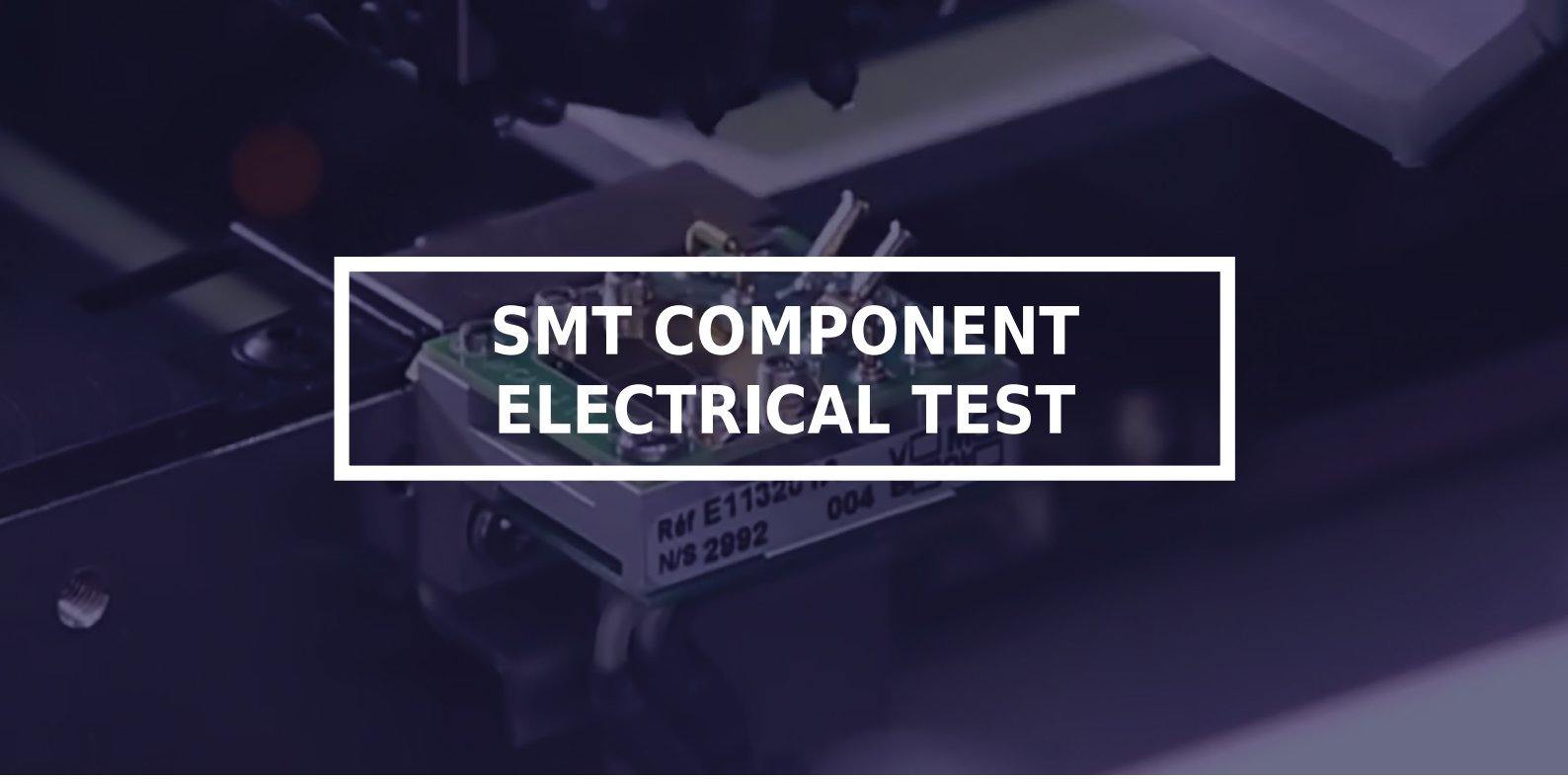
With pin-in-paste technology, through-hole (PTH) component placement can follow the SMD component placement process, with both being reflowed together in the oven. Using our solder paste dispenser, plated-through component holes are filled before the insertion of the components. This eliminates the wave soldering process altogether to dramatically improve line throughput and efficiency.

Two dispensers are available :

- air / time system – providing an economic dispensing system (**iico** and **iineo**)
- archimedean screw – the ultimate in control and performance (**iineo**)

Available on the following machines

iineo



SMT COMPONENT ELECTRICAL TEST

ELECTRICAL TEST

SMD COMPONENT TESTER

Europlacer's component tester is a critical option for customers working within high specification fields such as automotive, military, medical or avionics.

Crucially, the tester can be independently calibrated against all international standards & institutes. It guarantees you and your customer the statutory performance required when working on demanding applications.

Some suppliers provide a 'verification' system to check component status. However these units are unlikely to be independently verifiable against international standards of compliance.

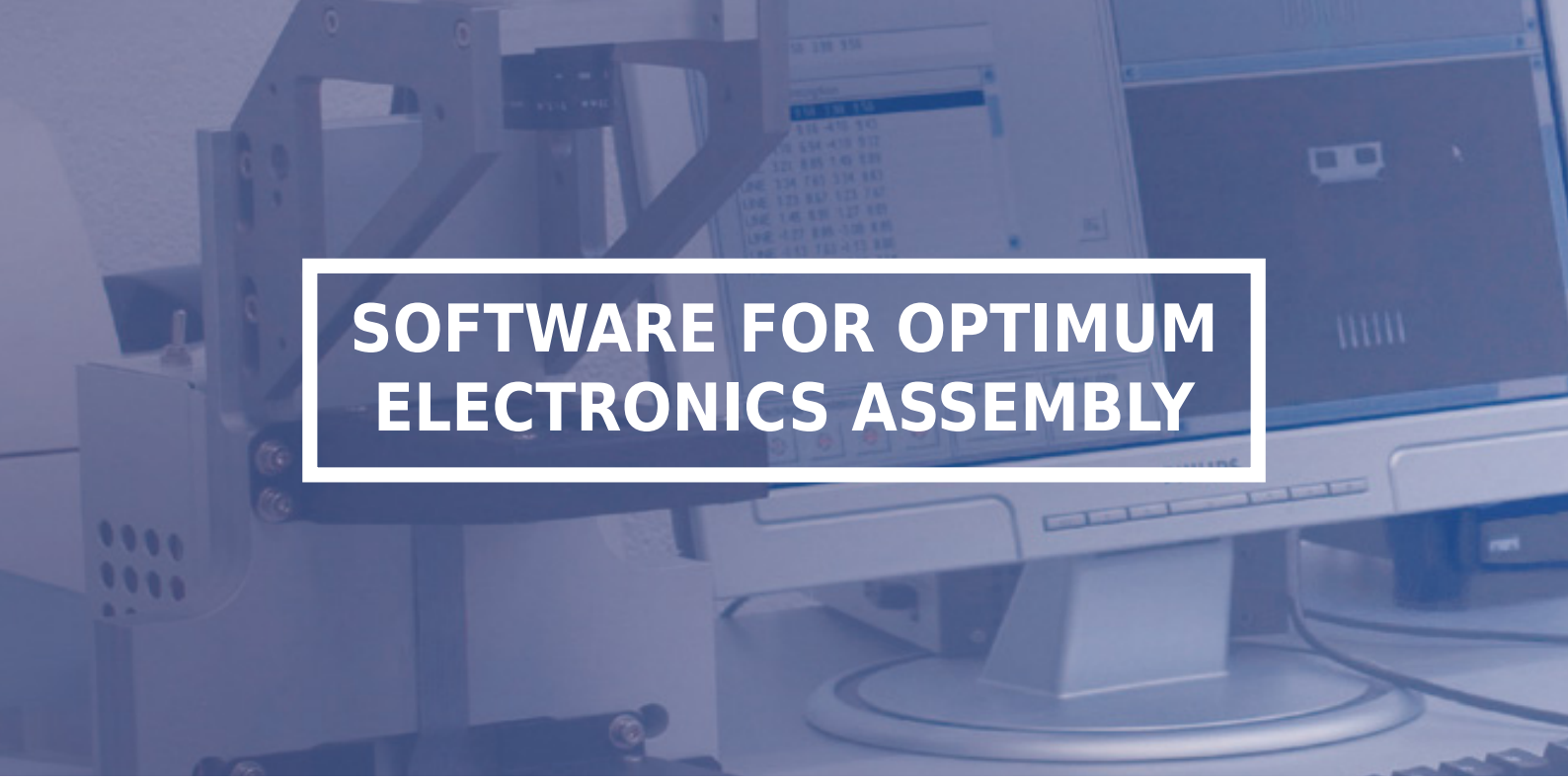
Europlacer's electrical test head is mounted inside the machine structure, and does not compromise any platform resources, including the feeder count. The head comprises a measuring bridge consisting of four electrodes linked to a flexible circuit, on which the machine places the components to be measured.

The component tester can measure resistors, capacitors, diodes and inductors with voltages up to 40V. It can be programmed to test all components prior to placement, or the first and last components to verify correct feeder loading. Built into the platform structure, the component tester is an intrinsic element of Europlacer's integrated intelligence system.

All test data is held at component level to provide control and, where necessary, traceability at individual circuit level to give confidence that you've completed the process within design and production limits.

Available on the following machines

iineo **xpii**



SOFTWARE FOR OPTIMUM ELECTRONICS ASSEMBLY

SOFTWARE

II SOFTWARE SUITE

As the first company to introduce intelligent feeders to SMT production lines back in 1993, Europlacer has made intelligence the nucleus in all we have developed and achieved to date.

This dedication to providing intelligence comes from listening too and genuinely understanding how our customers want to work.

The Integrated Intelligence software suite includes solutions for efficiently managing your SMT operation. Expandable, the software tools help you to be more effective at every stage of the production process.

Online, our graphical & friendly user interface is common across all our range of machines, even the older generations, as we understand the need for commonality inside a production team.

Offline, a range of productivity tools allow fast introduction of new products, rapid changeovers, stock management, traceability and more.

- Graphical User Interface RC
- Offline RC
- CircuitCam Express (Aegis)
- Multi job optimiser
- Set-up help
- Stock management
- NPI
- Promon
- Total Traceability
- Auto Adaptive Sequencing

SOFTWARE FOR OPTIMUM ELECTRONICS ASSEMBLY

SOFTWARE

GRAPHICAL USER INTERFACE RC

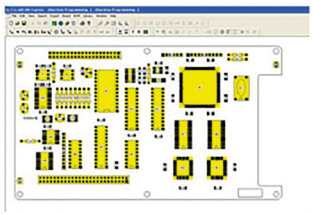
The machine software, called RC, is an Intuitive Operator Interface to the machine. Information is displayed pictorially giving faster access without confusion.

OFFLINE RC

Offline programming stations can be set up on a standard PC hosting the Europlacer software suite.

Using the same friendly graphical user interface as the machines, it allows complete off line program creation, verification and optimisation. The system proposes optimum loading plans and gives production time estimations. It also acts as a centralised database for Stock Management, Traceability, etc...

CIRCUITCAM EXPRESS

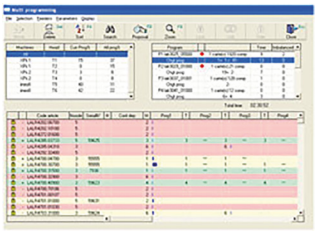


CircuitCAM Express expedites and enhances a great number of tasks that manufacturing or process engineer performs each day, and quickly becomes the engineer's ultimate process tool.

It results in improved productivity, reduced lead times, increased product quality, and ultimately increased profitability.

SOFTWARE FOR OPTIMUM ELECTRONICS ASSEMBLY

MULTI JOB OPTIMISER



Our Multi-job optimiser option creates common loading plans for groups of jobs, it minimises feeder changes, significantly reduces product changeover times and improves the general throughput of the line.

Being able to review and plan workload and loading patterns in advance, whilst reacting to component shortages or re-priorities in real time is an important factor in a high mix environment. The optimiser is a simple graphical tool to improve the efficiency and throughput across a single machine or a series of multiple machine lines.

SET-UP HELP

Set-up help facilitates the new product introduction from a programming station by preparing the machine loading for the next job without interrupting production.

After selecting the next job ‘B’, the required items are automatically searched for on the machine and on any external storage zones which are connected. Feeders that are connected, either on machines or on the storage racks and trolleys, can be highlighted for processing. Components not loaded are listed so that feeders can be prepared while job ‘A’ is still running.

SOFTWARE FOR OPTIMUM ELECTRONICS ASSEMBLY

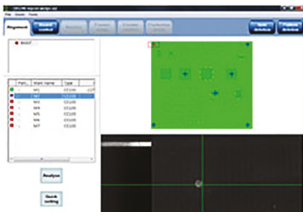
STOCK MANAGEMENT

Stock management makes it possible to trace all parts used on the pick and place machines or within the shop floor environment.

It gives users the ability to easily locate all components and know the remaining quantities in near real time, while production is still running. When combined with our Lzero line storage systems, component management becomes a fully controlled & integrated process.

Capable of being integrated into a customers ERP systems, stock management uses its universal interface & database to import or export data to and from alternative storage facilities or external databases.

NPI



NPI is a fundamental process for any operation that requires a fast and seamless new product introduction process.

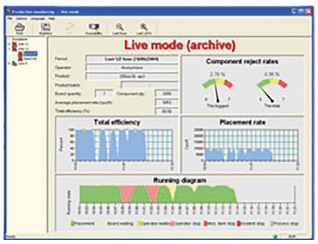
Used to validate any new product ahead of being processed, NPI gives the user complete control of package and programming details without interfering with live production, keeping throughput efficiencies high.

Being able to load a CAD or Gerber file and validate component type, orientation, feeder type etc. ahead of production before placing any component.

After loading a new PCB in the machine, operators just need to follow the different steps that help to check and validate all parameters involved in the new product. When an error is detected, the software allows the operator to make corrections and test without halting production.

SOFTWARE FOR OPTIMUM ELECTRONICS ASSEMBLY

PROMON

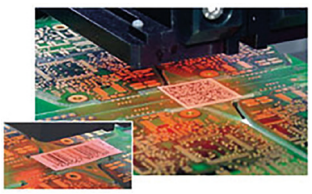


Real time production and machine performance feedback is essential in today's manufacturing environments. PROMON provides all the information required to give operators and managers the confidence to monitor and improve their production process.

Live and historical data detailing throughput, by machine / operator / placement head / period is combined with technical data showing feeder and component attrition data.

The ability to have multiple stations reporting remotely, with export tools for trend analysis, means PROMON is really the only tool you'll need to monitor and maximise line performance.

TOTAL TRACEABILITY



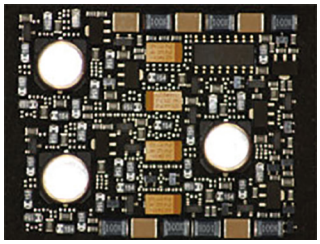
Being able to determine 'what happened and why?' is an important ability, especially within a fast and dynamic production environment.

Traceability provides a full and expandable solution as it is able to monitor and record not only the component source, but the full process the component was subjected to, including feeder type and serial number, test processes and results – and ultimately the fully assembled PCB detail.

We record all the data automatically and can integrate with external sources for trend analysis and data collection.

SOFTWARE FOR OPTIMUM ELECTRONICS ASSEMBLY

AUTO ADAPTIVE SEQUENCING



A.A.S is a unique and powerful Europlacer tool which eliminates, in real time, potential placement issues caused by poor programming or component run-out in production.
A.A.S automatically defines placement priorities depending on the components already placed, to create a collision-free placement sequence. The process starts with program generation where getting the placement program right first time results in an improved process and a better quality product.

This complex task is fully automatic and considers the placement sequence around parameters including component package, PCB topology, head trajectory and the optimal placement sequence.

On densely populated boards, there is potential for nozzles to influence a previously placed component. A.A.S gets all component data from the library (physical dimension, nozzle type, placement parameters etc.) and then analyses the possible placement scenario to create placement rules for each component.

These rules are applied automatically and are constantly monitored during a full production run guaranteeing optimal performance and quality of product.

Available on the following machines

iineo **xpii** **iico**

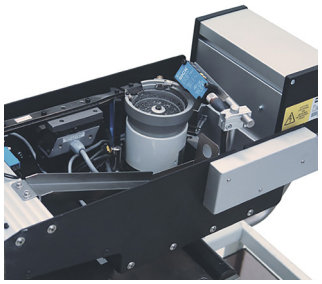
PICK AND PLACE SPECIAL FEEDER

SPECIAL FEEDERS

For those extra special applications, Europlacer has developed special feeders for non-standard SMT components that still need to be placed automatically.

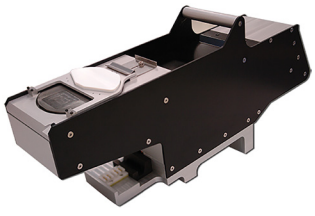
Our heritage is solving complex and challenging placement automation issues. Extending the utilisation of your placement platform extends the benefits in throughput and quality. From bulk loose bowl feeders to fluxers and label printers, Europlacer is able to provide an intelligent solution that integrates fully into our standard platforms to meet the most demanding applications.

Bulk feeder



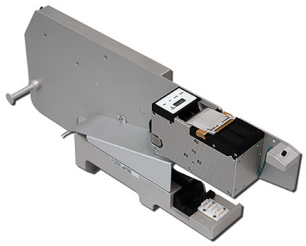
- Automatic assembly of parts delivered loose and in bulk
- Special developments on request
- Bowl replenishment is fast and easy
- Fitted on a trolley for extremely fast product changeover
- Same Integrated Intelligence as other Europlacer feeders

Dip fluxer



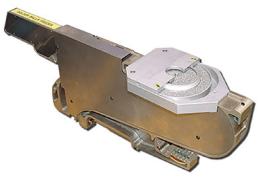
- Used for Pop (package on package) assembly processes
- Variable flux thickness set up
- Flux reservoir replenishment is fast and easy
- All parts are easily removable for cleaning

PICK AND PLACE SPECIAL FEEDER



Label feeder AMS

- Perfectly augments Europlacer's Total Traceability
- The reel contains pre-printed serial labels
- Two models depending on label size
- Same Integrated Intelligence as other Europlacer feeders



Solder ball feeder

- High-yield automatic assembly of solder balls
- Single or multiple ball nozzle capability
- Ball reservoir replenishment is fast and easy
- Placement on PCBs or other substrates and pallets

Available on the following machines

iineo **xpii** **iico**

SMT AUTOMATIC TRAY LOADER

AUTOMATIC SMT TRAY LOADER

The auto tray loader (sequencer) is a vertical feeder storing up to 30 trays

Jedec trays or other matrix trays with a maximum size of 340mm x 190mm x 13mm are fed automatically to the pick up position. Occupying a single feeder zone, the storage capacity for devices ready to be presented to the placement head is second-to-none. Once the contents are depleted, or the feeder no longer required for production, it's easy to slide the loader out and replace it with alternative trolleys or carts to complete the cycle.

Thanks to the large replenishment door, trays can be replenished during use, without halting production.

The auto tray loader can be programmed offline to improve machine utilisation, or online once loaded into the feeder zone on the machine.

AUTOMATIC TRAY LOADER

- Intelligent feeder
- Handles up to 30 'vertically-held' matrix trays
- Easily exchangeable with a tape or feeder trolley in less than a minute
- Rejected components are placed back in their original cell
- Trays can be replenished during production without halting the machine

Available on the following machines

iineo **xpii**

SURFACE MOUNT TRAY HOLDER

SMT MATRIX TRAYS

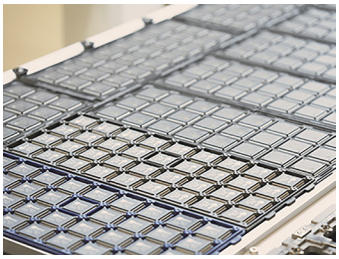
INTERNAL MATRIX TRAY HOLDERS

A variety of different matrix tray holders may be fitted as standard inside the machine, with no impact on standard PCB dimensions or tape feeder capacity. Capable of accepting up to 10 standard Jedec trays the holders provide significant capacity for the presentation of QFPs, BGAs, connectors, heatsinks and any other non taped devices.

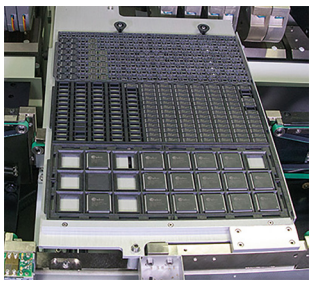
If you have a specific application, tray holders can be customised to fit your need.

- Intelligent feeder
- Up to 10 Jedec trays on iineo I
- Up to 66 unique part numbers (more on demand)
- Easy to program through the machine graphical interface
- No reduction in machine feeder capacity or maximum PCB size

IINEO I



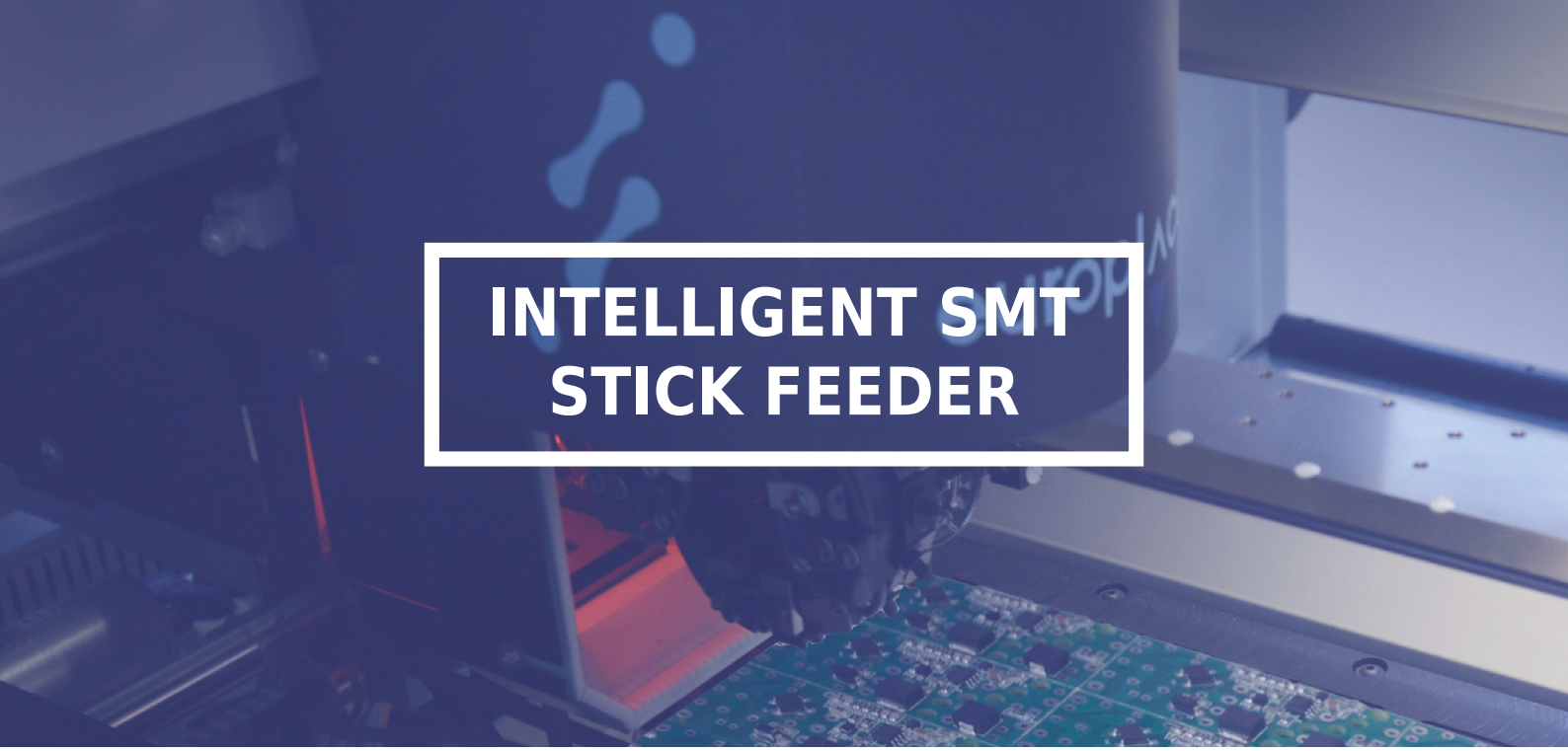
IINEO II



IICO

Available on the following machines

iineo xpii iico



INTELLIGENT SMT STICK FEEDER

STICK FEEDER

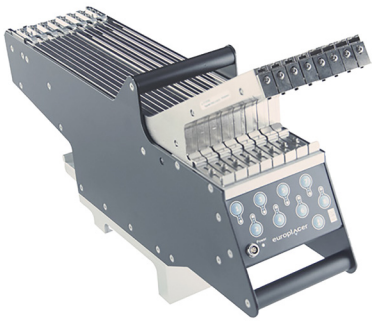
INTELLIGENT STICK FEEDER

Europlacer's programmable stick feeder is the most flexible solution for components supplied in stick format.

It accommodates SO, SO medium, SO large and TSSOP type components on a base plate capable of handling feeder sticks in eight positions. Different types of SO can fit on the same base, while replenishing the feeders can be completed without halting the machine.

Unlike old vibratory systems with their erratic performance and need for constant adjustment, today's components are driven on individual belts that almost match the speed of picking from tape feeders. Adaptors are available for most standard SMT components, and special adaptors can be developed for specific applications.

Our Belt Feeder for sticks joins our feeder solutions in being fully intelligent with the same benefits and features as the other feeders in the Europlacer range.



Intelligent Belt Feeder

- Component recognition
- Data entry by micro-terminal and bar code
- Auto adjustment of pick-up offset
- Batch ID for traceability reports
- Fast product changeover

Available on the following machines

iineo xpii iico


ONE PLATFORM
NO LIMITS

europlacer

EP710

SMT SCREEN PRINTER MACHINE EP 710

Europlacer's ep700 series printers combine the company's commitment to high performance and reliability with outstanding value. The platform has been developed to cope with the rigors of high volume SMT production. Yet it incorporates the flexibility needed to deliver the fast set-up and product changeovers demanded by low and medium volume operations working in high-mix environments.

Ease of use, high-end performance

Designed with ease of use, high-end performance and low cost of ownership in mind, the platform utilises the most advanced drive control technology available, including 1 micron resolution linear encoders on all axes. A suite of intuitive software enables total control of the printing process.

The printers are fully equipped, as standard, with many features such as automatic rail width adjust, auto stencil loading, a fully programmable Under Stencil Cleaner and even automatic stencil paste inspection. In fact, everything you need to complete the SMT print process without exception or compromise.

AUTOMATION

Effortless automation is at the centre of the platform. EP710 printer is comprehensively equipped with almost every parameter fully programmable.
That's how they address the demands of high volume surface mount production with ease. Yet with flexibility built in, set up and product changeover are fast and efficient too; they don't impact your throughput. So it's also the ideal platform for low and medium volume assembly in challenging high mix environments.

ACCURACY

Expectional print accuracy and repeatibility from the highest levels of alignment. A truly unique vision system deploys Europlacer's patented Dual Roving camera (DRc) technology to precisely align the board and stencil, and to check for solder paste presence on the stencil before printing. DRc innovations also include SmartCal, a zero-cost calibration utility designed to maximise and maintain your preocess window, and deliver optimum performance for the life of the platform.

INTEGRATED INTELLIGENCE

Dual Roving camera (DRc)

The vision system utilises a unique Dual Roving camera (DRc) method for automatic board and stencil alignment. Not only does this innovative vision system provide the highest level of alignment capability, it also incorporates SmartCal.

With the ongoing minaturisation of substrates and components continuously reducing the process window, SmartCal provides the user with immediate and cost-free calibration. SmartCal allows maximum process window and optimum performance to be maintained for the operational life of the machine. The ep700 series also deploys a unique capability to check for solder paste presence on the stencil before printing. The vision system aligns the PCB with the stencil using fiducial marks or PCB & stencil features.

Dual Roving camera

5 year component warranty

smart options

EP710

SPECIFICATIONS

Max board size	610 mm (x) by 508 mm (y)	Board stop	fully programmable
Min board size	45 mm x 45 mm	Throughput time	11.5 secs (standard)
Alignment Repeatability	20 µm @ 6 Sigma 2 cpk	Up/down line protocol	SMEMA compatible
X/Y PCB Alignment	±5 mm	Operating system	Microsoft WindowsTM 7 Pro
Stencil load/unload	Automatic	Power consumption	13 amps
Squeegee material	Metal or Polyurethan	Power supply	110V to 240V ac, single phase
Squeegee pressure	1 kg to 20 kg	Operating Temperature	10°C to 35°C @ 30% to 50% RH
Print speed	5 mm/sec to 250 mm/sec	Weight	650 kg
Board clamping	pneumatic foils		

iineo+

NEW

A highly specified machine, configured with new design, new RC 5.16 platform software and integrated electrical tester.

RC 5.16

RC 5.16 is the latest version of the Europlacer graphical user interface, featuring a wider touch-screen monitor to facilitate fast and easy navigation across the graphical menus.

- Microsoft® Windows® 10 64-bit OS
- Clear Graphical User Interface for ease of operation
- Multi core management to speed up vision analysis, program placement optimisation and internal communication
- Embedded Jedec Tray library capability
- Enhanced Package Library:
  - Display non-optimal package settings with option to override
  - Exact shape representation for different device types (segmented, flip chip, etc.)
  - Display and adjust position of pin 1 on each package
  - New special analysis mode for difficult devices
- Electrical test wizard, with picking and placing test interface
- Server/Client management of databases to reduce traffic on the user network, resulting in higher communication speeds and support for multiple machine installations - up to 9 machines per line
- Enhanced analysis of multi leaded or balled devices using high resolution fixed camera
- Online documentation

COMPONENT TESTER

Europlacer's integrated component tester is an essential option for manufacturers operating in high specification fields, such as automotive, military, medical or aviation. The tester can be independently calibrated against all internationally recognised standards and standards institutes. Dynamic testing during component placement guarantees the statutory performance required when working on demanding applications. Europlacer's electrical test head is mounted inside the machine structure, without compromising any platform resources or the feeder count. The head comprises a four-wire Kelvin-connected LCR measuring bridge linked to a flexible circuit test pad. This is where the machine places the components to be measured between the pick and place actions.

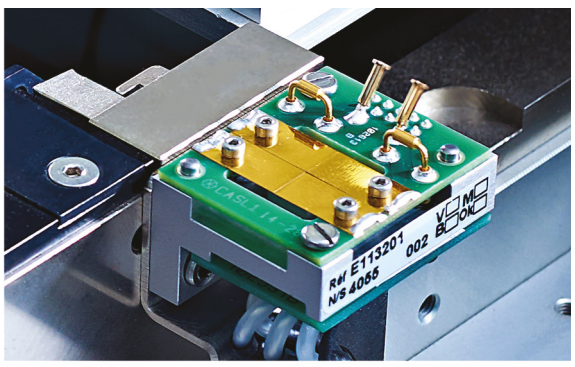
iineo+ offers two proven technologically advanced packs supplied at a commercially attractive level

TRACK PACK

An upgrade pack that bundles Europlacer's Total Traceability and PROMON options to take 1D and 2D traceability to a new level. Track Pack also adds an auto width conveyor, programming station and microterminal.

AERO PACK

A high-integrity ESD upgrade pack that extends the standard ESD compliance beyond the board transport and pick & place mechanisms to the entire iineo+ platform.



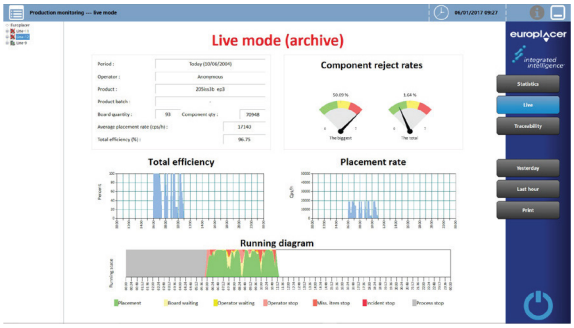
Electrical Tester

TOTAL TRACEABILITY™

Total Traceability lets users integrate full traceability into the production process. This intelligent system provides comprehensive data logging for component-level build traceability, generating data for every board produced. The PCB camera reads board codes while the intelligent feeders hold batch data. The archive can be processed by PROMON production monitoring software or exported for traceability analysis. Based on product identification, the system also permits automatic program loading to streamline changeover.

PROMON

Serving as a production ‘dashboard’ for Europlacer machines, PROMON provides an easy-to-use single source of production management data. It continually collects and stores all production data from a machine, a single line, or multiple lines, with Live Mode allowing real-time viewing and local or remote analysis. Statistical Mode can analyse data over a specified period. With quantity data needed for management and reporting, and performance data instrumental in optimising productivity, PROMON is an ideal tool to analyse and search traceability data.



Lzero3

A PRODUCTION-WIDE ISSUE

Effective materials control can deliver the biggest productivity advantage to an electronics manufacturing line, even one where each assembly process is optimised to perfection. It's a wider issue. An issue where space, component identification, handling characteristics, material movement functions and operator challenges combine to constrain efficiency.

Or you can choose to make it an issue that is managed and automated to eliminate those constraints. Europlacer knows how with Integrated Intelligence™ and expertise that extends beyond the assembly line. Proven investment returns show how Europlacer storage solutions have allowed companies to redeploy operators from stock management into more productive line-side roles, achieving greater throughput in the same amount of time.

"Even before you start up the assembly line, intelligent line-side & warehouse storage delivers astounding improvements in productivity and build quality, not to mention control and traceability as standard."

INTEGRATED INTELLIGENCE

AUTOMATIC EXPANDABLE STORAGE

Europlacer's Lzero3 storage cabinet offers flexibility and expandability far beyond that of any other intelligent storage solution. With a capacity to 2083 reels, it is the hub of line-side & warehouse logistics. Every aspect of the process is optimised by the in-built WMS software suite. Lzero3 automatically scans incoming reels for identification, measures them to assess size, validates the storage requirement and moves each reel to the ideal internal location.

Reel widths from 8mm to 32mm and diameters from 7 inches (180mm) to 15 inches (380mm) are catered for without the need for specialised containers, with three base Lzero3 configurations offering a range of storage choices. Optional extension units fit on top of the basic cabinet, making no impact on floorspace. If required, oddform components placed in standardised trays are handled and stored with equal automatic ease.

SECURE ODDFORM & PCB STORAGE

The Szero range of convenient manual storage systems includes models designed for printed circuit boards and oddform parts, including sticks, trays, tools, oversized reels and loose devices. Szero cabinets boost productivity through highly efficient inventory management without the automation. All are key elements of an effective materials handling domain managed by Europlacer's intelligent WMS software suite residing on the Lzero3 cabinet.

Like its Lzero counterparts, each Szero cabinet uses barcoded or data matrix labels to identify, track and manage parts in a line-side storage environment. And to provide full traceability data. Unambiguous guidance ensures that operators find it easy to adhere to 'First In First Out' (FIFO) and 'First Expiring First Out' (FEFO) regimes.

SIMPLE & SCALABLE

FULL TRACEABILITY

HUMIDITY CONTROLLED

Moisture sensitive devices present a serious assembly issue that requires a high level of control. Europlacer storage cabinets deliver that control.

A lack of proper control for MSDs can result in internal component damage during reflow due to moisture expansion. This can create insidious latent component defects that escape inspection and test. Both Lzero3 and Szero cabinet ranges can be equipped with absorption units that control humidity to safeguard moisture sensitive devices.

Optional Europlacer humidity control systems contain the environment within a storage cabinet to less than five percent relative humidity. While delivering permanent RH control, WMS software tracks exposure to calculate remaining 'floor live times' for devices exposed to ambient atmospheric conditions before specifications are exceeded.

LZERO

- Up to 2083 unit locations
- Automatic unit handling
- Concurrent multiple loading
- Eliminates reel boxes
- Storage trays for oddforms
- Built-in WMS software

SZERO

- Secure oddform storage
- Reels over 40mm thick
- PCB and tool storage
- Humidity control option
- Full traceability
- WMS slave cabinet

EVERYTHING UNDER CONTROL

WMS knows the exact location of every reel, stick and tray across the production environment including on the live line in feeders or in trolleys. It handles multiple jobs, stock deployment priorities, MSD exposure directives and quarantine requirements. As an option, it offers seamless integration with ERP, MRP and SCM systems for business-wide efficiency. Operators can input units absolutely anywhere, then simply load and go. It is the ideal 'stock and forget' solution.

Clear graphical scenarios make procedures unambiguous. WMS integrated intelligence provides live production metrics:

- **common elements across current jobs**
- **number of jobs that can be completed before kitting commences**
- **acceptable alias data for uninterrupted assembly**
- **data filtering to supplier and OEM level for locked-down designs**
- **task guidance for returning part-used reels to storage**
- **real-time stock control**

> "Managing lot sizes of one is a prerequisite for lean manufacturing. With WMS, production engineers can resolve to single units – one reel, one tape, one stick, one tray – and manage each individually."

Europlacer Warehouse Management Solution (WMS) software is the heart of every effective line-side or warehouse storage domain. It is integrated into Lzero3 cabinets and links to Szero units. WMS delivers precise material control and tracking for every assembly logistics phase from data input and incoming materials, through job planning and picking sequencing, to kitting and re-stocking.

It's a fully paperless process. Bar code scanning provides the data needed to validate, trace, store and plan. Kitting is automatically optimised against stock levels, availability and job schedules.

WMS

Receipt of parts	Approval control	Labelling & identification
Goods inwards	Planning	Picking
Set-up SMT lines	Material Consumption	Return parts to warehouse
Traceability	FIFO & FEFO	Stock expansion

InterElectronic

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