

MYNews

A magazine from Mycronic

2022.01

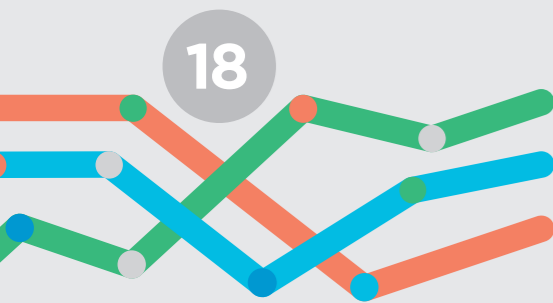
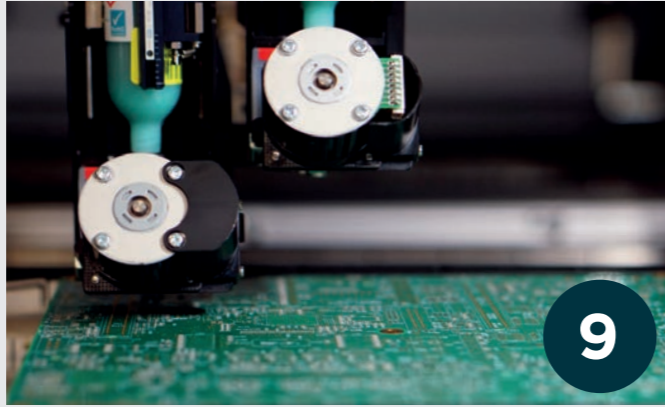
The new MYPro I series 3D AOI

Programming just got simpler

AUTOMATED INDUSTRIAL DISPENSING
for a rugged world

Change is coming.

IS YOUR FACTORY PREPARED?



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MYCRONIC

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In times like these, we see how much flexibility really matters. Faced with global supply chain disruptions, material shortages and surging demand for high-reliability electronics, our customers continue to succeed. This is a real testament to the strength of agile production and the added value of Mycronic's solutions.

Our material handling expertise and solutions have proven increasingly valuable in these volatile times. Severe supply chain issues have resulted in acute material shortages. Freight capacity is unpredictable. And freight costs are on the rise. Very often, we find that improved material flow — from incoming goods to storage, kitting and feeder loading — leads to significant gains in planning, traceability and resource utilization in response to these disruptions.

At the same time, these challenging conditions mean manufacturers can no longer afford the inefficiencies and reject rates they might have accepted in the past. Dashboard tools like MYCenter Analysis have helped to drastically increase productivity while making the causes of rejects faster to diagnose and solve. As customers continue to adapt to rapid changes, this combination of reliable automation and useful data analytics remains at the core of the Mycronic user experience.

The new MYPro I series 3D AOI system represents a huge leap forward in this respect. When we acquired Vi TECHNOLOGY, we knew that the K3D series was ideal for mid-tier customers. Now, thanks to sophisticated machine learning algorithms based on development at the Center for Deep Learning in Electronics Manufacturing (CDLe) in San Jose (Silicon Valley, California), the new MYPro I series makes it possible to automatically eliminate escapes and implement high-performance inspection in any production mix or class. In short, it's not just AI for the sake of AI — it delivers measurably shorter programming times for operators of any experience level.

With a continued shortage of operators in the field, we take great pride in hearing how much people enjoy working with our machines. We know that operator training efforts are huge investments.



We know that software needs to be intuitive and self-explanatory. And we understand the value of pragmatic guidance toward the right KPIs when running a factory. Rest assured that tools like MYCenter Analysis and Escape Tracker are only the beginning, and that we're constantly finding new ways to deliver more actionable insights that improve line performance, quality and yield for everyone on and off the line.

Finally, I'm delighted to see the continued growth in demand for our MYSmart dispensing and coating solutions. Globally, Mycronic is now the world's second-leading provider of electronics dispensing and coating solutions, with significant growth in China, the US and EMEA. These modular MYSmart solutions are continuously improved and, when needed, customized for a wider range of tier-one manufacturers in automotive, medical and other high-reliability sectors — a strong endorsement of the quality and expertise we continue to deliver.

Of course, many challenges and opportunities remain ahead as the global electronics market experiences explosive growth. And if there's one thing that we have learned, it is that close customer collaboration, both digitally and physically, is vital in these demanding times. We look forward to strengthening these ties as we continue to embrace all the changes that lie ahead.

// Clemens Jargon
Senior Vice President, High Flex



Programming just got simpler with the new MYPro I™ series 3D AOI

Faster programming. Smarter guidance. Zero false calls. When it comes to advanced 3D AOI, demands are high and experienced operators are often in short supply. Mycronic's latest answer is the MYPro I series 3D AOI, which leverages powerful machine learning algorithms to enable rapid programming and easy implementation of high-performance AOI for any operator in any production mix.

TEXT: GRANT BALDRIDGE PHOTO: MYCRONIC

In recent years, Mycronic's K series 3D AOI has excelled in processing all types of PCBs, offering complete test coverage with high accuracy and repeatability for leading high-reliability manufacturers worldwide. Now, the next-generation MYPro I series brings new levels of automation and ergonomic design to make every program easier to create, fine-tune, adapt and optimize for operators of all skill levels.

REDESIGNED FOR INDUSTRY 4.0

As part of the MYPro Line family of integrated SMT solutions, the new system's software and hardware platforms have been redesigned to provide a unified user experience. In addition to the new name, graphical user interface, and exterior design, the MYPro I series is designed to be fully compatible with Hermes and IPC CFX protocols to offer a consistent Industry 4.0 operating environment within all MYPro Line equipment.

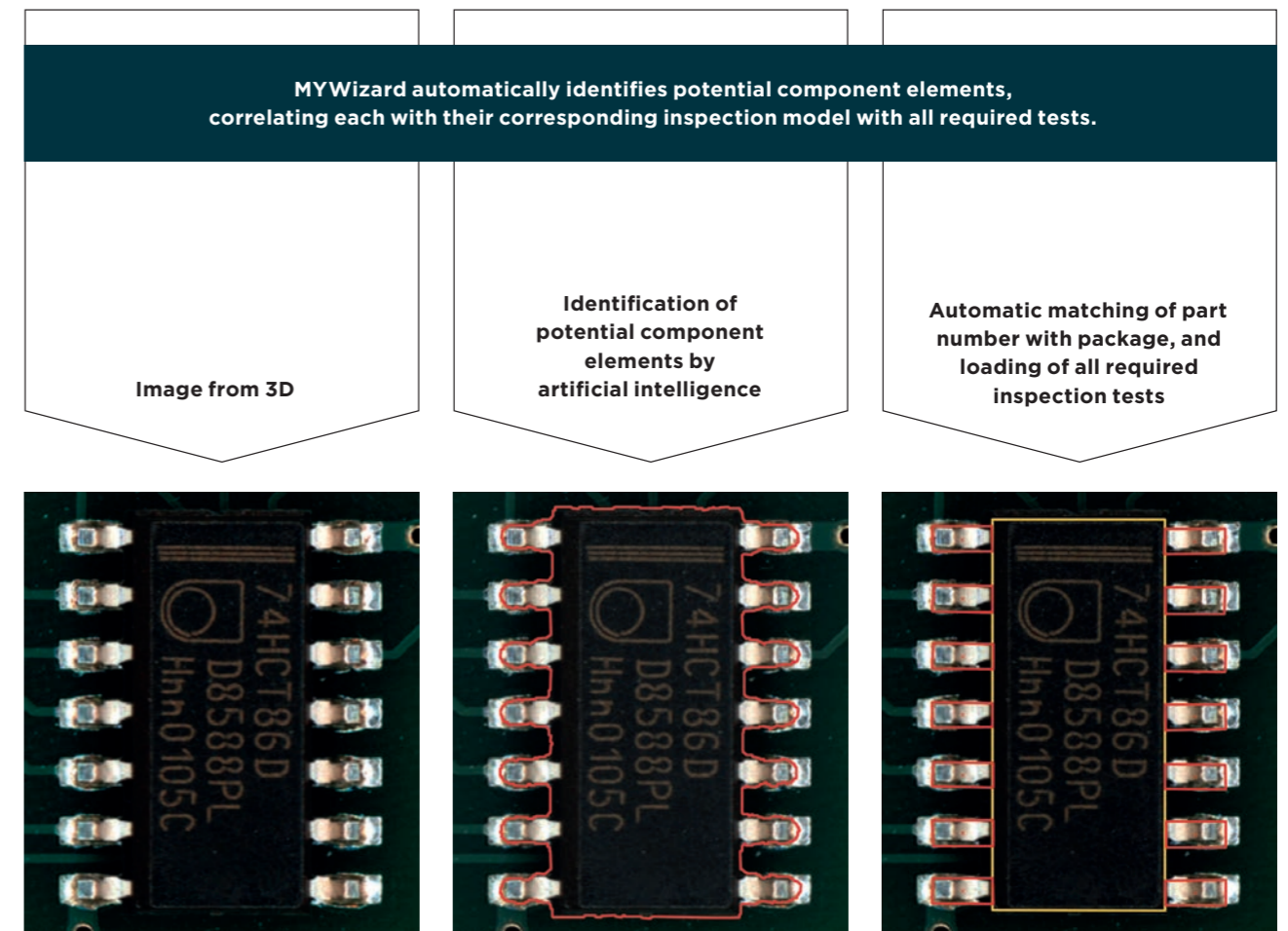
30% FASTER PROGRAMMING

A major highlight of the MYPro I series is a new MYWizard user interface, developed specifically to guide operators more rapidly through the programming phase. Utilizing advanced machine learning, the system automatically identifies a wide range of component characteristics and correlates each with a package type from the library, thus reducing programming times by up to 30 percent, compared with the previous K series 3D AOI.

During the programming phase, features such as the board's fiducials and the components' body, leads and polarity marks are automatically identified. The system's machine vision algorithm recognizes all standard components in order to automate the programming of all inspection tests to be performed.

The operator simply needs to check the MYWizard proposal, make some adjustments if necessary, and manually program any non-standard or custom components. Because all modifications are stored in a central library, programming time continues to decrease with every new job.

"The level of skill or experience required to program a 3D AOI is a real concern for electronics manufacturers, so user friendliness, ease of programming and fast implementation are all high on their agendas," says Alexia Vey, Product Manager for product line Inspection. "Once the central library has been complemented with several products, MYWizard makes it possible for an AOI programmer with little experience to program in less than thirty minutes — which is extremely fast for a system with these capabilities."



AUTOMATED ESCAPE TRACKER ELIMINATES FALSE CALLS

Recent advances in pattern recognition also make it possible to automate program fine-tuning, even as production conditions change. Thanks to Escape Tracker, a real-time performance optimizer for the system's inspection library, the MYPro I series automatically ensures that no new false calls or escapes are introduced while fine-tuning the library to improve FPY.

"During any programming phases that require fine-tuning," says Alexia, "Escape Tracker automatically runs in the background to monitor the generation of any potential escapes or false calls in the central library. More than that, it guides the operator in how to fix them, adding an extra level of reliability control before any modification is integrated into the central library".



AI algorithms makes programming not only easier, but also smoother and faster without compromising the reliability of the inspection.

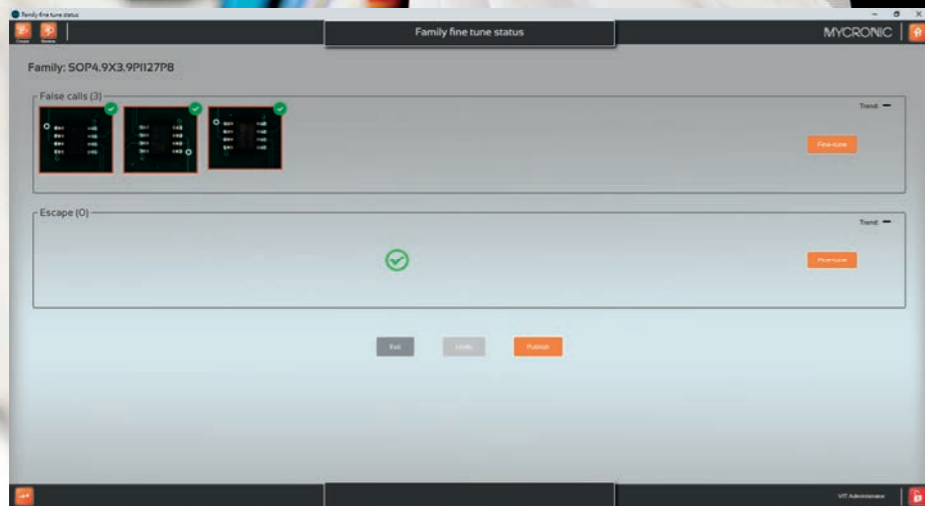
ACCELERATING LEARNING CURVES WITH AI

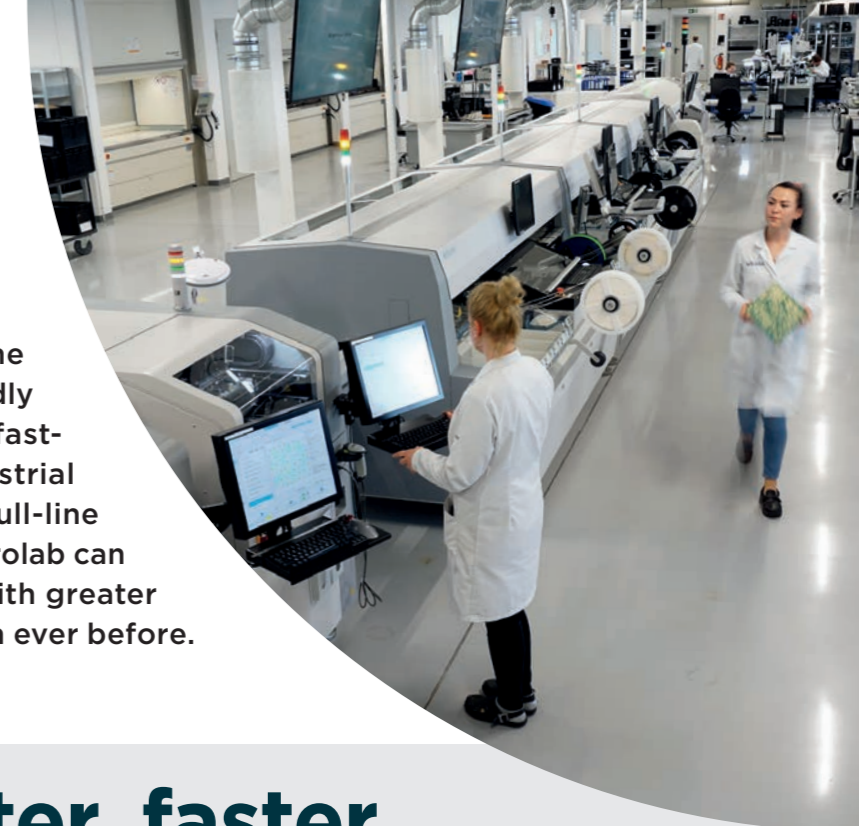
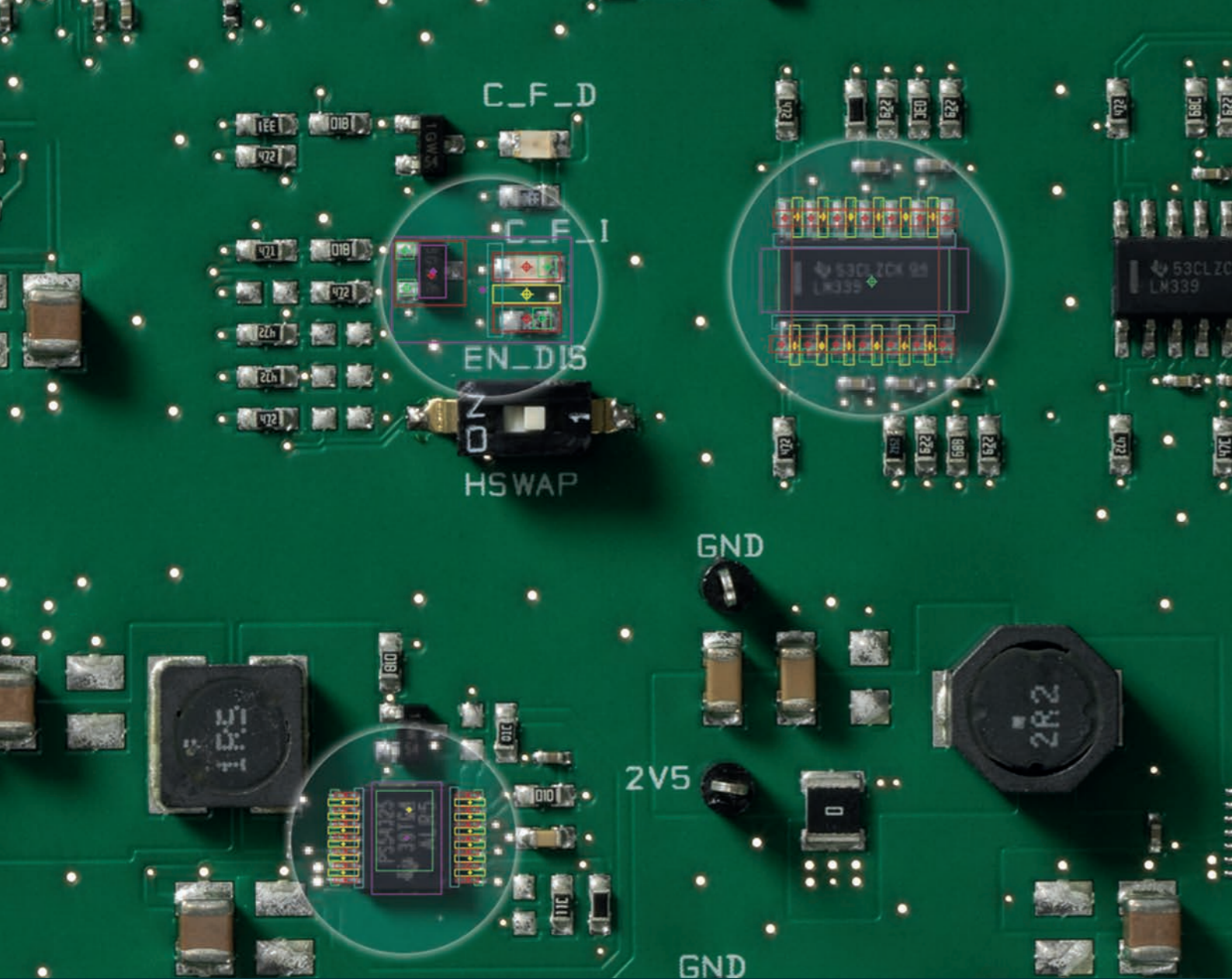
The advanced programming capabilities of the MYPro I series have been made possible thanks to a long-term R&D program dedicated to the integration of artificial intelligence into all Mycronic inspection platforms. The benefits, including ease of use and intuitive programming guidance, were first seen years ago in the industry-leading PI series 3D SPI, and are now being fully realized in the next-generation MYPro I series 3D AOI.

"These machine learning algorithms are all about teaching the system what to recognize, while also teaching the programmer exactly where the system needs human expertise," concludes Alexia. "They make it possible to manage supply and process variations while constantly improving the reliability of the central program library – all with less and less operator skill required. Whatever your production mix, the MYPro I series accelerates this learning curve more than ever before."

"The primary goal in developing the MYPro I series was to bring one of the most powerful 3D AOI technologies on the market within the reach of high-mix EMSs and OEMs, that need to handle large numbers of NPI jobs and short production runs", says Jesse Dowd, VP of Global Sales Assembly Solutions High Flex. "To support this, we focused our innovation on making the programming and fine-tuning as simple and fast as possible. This not only benefits our traditional high-reliability, mid- to high-volume customers, it also puts the possibility of advanced 3D inspection into the hands of many more manufacturers, no matter how little experience, or how many changeovers a day, they might have", adds Jesse. ●

Escape Tracker has identified three potential false calls, and guides the operator on how to eliminate them in order to finalise the new program.





Just outside of Nürnberg, Germany, one forward-thinking manufacturer is rapidly modernizing its production to meet fast-growing demands for advanced industrial IoT electronics. Thanks to the latest full-line assembly solutions from Mycronic, mikrolab can now respond to global competition with greater speed, quality and cost efficiency than ever before.

TEXT: GRANT BALDRIDGE PHOTO: MIKROLAB

Smaller, smarter, faster

Full-line flexibility in Germany's industrial heartland

Put your inspection on autopilot.

Introducing the MYPro I series 3D AOI

Inspection programming has never been simpler. The new MYPro I series 3D AOI pushes the boundaries of machine learning and automation to ensure easy implementation of high-performance AOI for any operator in any production mix or class. Thanks to intuitive programming guidance and self-optimizing process controls, even the most demanding manufacturers can continually improve product quality and first-pass yield with minimal operator intervention. Learn how the new I series can empower your operations at mycronic.com

A NEW ERA OF AUTOMATION

Founded in 1978, mikrolab is based in the German industrial heartland, a region renowned for some of the world's most advanced manufacturing solutions for medical, automotive and industrial automation technologies. In recent decades, the company has specialized in the development of firmware and hardware for embedded digital systems, as well as prototyping, testing and series production of electronics assemblies and complete devices. Today some eighty percent of production is dedicated to sophisticated OEM products including navigation systems for maritime vessels, portable measuring and control devices, safety-relevant medical electronics and control systems for various industrial applications.

For nearly 20 years, the company's two SMT lines have served them well. But as customer needs evolved, a new production line was needed. In particular, mikrolab aims to significantly expand its share in the fast-paced EMS market, where an ability to handle far smaller and more diverse components, flexible changeovers and a wider range of batch sizes is an absolute necessity.

"Our customers are trying to assert themselves in the market by establishing entire product families," says Andreas Lebrecht, Production Manager, mikrolab. "This leads to smaller quantities and more assembly variants."

MYCRONIC

A full-line Mycronic solution — consisting of two MY700 Jet Printers and three MY300 pick-and-place machines — was chosen to replace the previous two SMT lines with the aim of ensuring the best combination of speed, flexibility and quality. MYCenter Material Handling, MYCenter Proactive Replenishment Monitor and MYCenter Analysis were also included to provide intuitive interaction with the data most crucial to maintaining high productivity throughout the assembly process.

BOOSTING FLEXIBILITY

One of the key motivations for the new investment was the need to handle far smaller components, down to dimensions of 150 × 300 micrometers, as well as larger board formats. “By replacing our four pick-and-place machines with three MY300s, we now have a much wider range of both board sizes and component types,” explains Andreas. “They can be as small as 01005 or 03015 chips, or as large as 140 × 73 × 22mm. Now we’re able to print, assemble and solder PCBs as large as 640 × 510mm.”

The addition of two MY700 Jet Printers has added further productivity gains. By eliminating the need for stencils, the solution enables rapid changes to solder paste application while maintaining speeds up to two million dots per hour, thus ensuring continuous supply to the pick-and-place machines. “The costs and procurement time of the stencils are completely eliminated,” says Andreas. “Setup is very fast, and thanks to the four ejectors, we can now apply adhesive dots and solder paste in one production run, even if there are already components on the side to be printed. We’ve removed all the limitations we faced with stencil printing.”

STREAMLINING CHANGEOVERS

Of course, a wider variety of products also means more changeovers, which is exactly the challenge the Agilis feeder system, e-label systems and

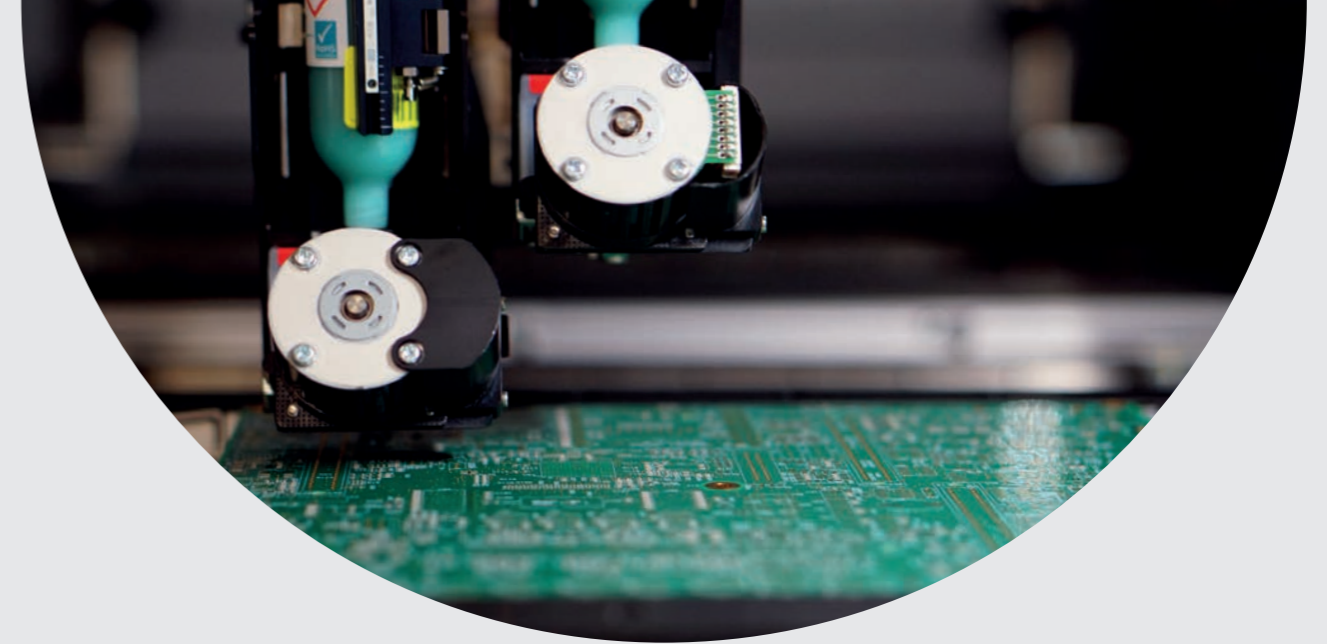
material handling software were designed to address. “The Mycronic set-up concept is significantly more cost-effective than the alternatives,” says Andreas. “The Agilis feeders are a huge advantage when you take into account our component diversity and batch sizes, and this has a direct impact on the available machine running time and production costs.”

With the new system in place, changeover times have been dramatically reduced, and setup errors have been virtually eliminated. The result is consistently high line utilization and daily placement output despite a growing number of changeovers, says Andreas. “We’re not impressed by a line’s theoretical placement performance, according to IPC. The real performance over the course of a day always depends on the range of components on the assembly, the distribution of components among the machines, the order’s batch size and the eventual downtime due to tooling, sampling or missing feeders.”

SOFTWARE-DRIVEN PERFORMANCE GAINS

For program creation, mikrolab uses a combination of Factory Logix Express and MYCenter with CAD import. “It’s a really intuitive way to create programs for the jet printers and pick-and-place machines,” says Andreas. “The processing time is minimal.”

To improve material flows and traceability, MYCenter Material Handling serves as a guide for operators throughout the kitting and changeover process. “The software makes it quick and easy to view the material’s current location, quantity and unique ID,” says Andreas. “It’s very simple for the staff to set up the feeders. Then the ID for each mounting position and serial number on the PCB are recorded during assembly and either transferred to our ERP or exported to an archive, which makes traceability even more precise.”





The new production line really enhances the product quality and expands our technological capabilities. Now we have much higher capacity.

Along the new production line are several large monitors displaying MYCenter PRM (Proactive Replenishment Monitor) and MYCenter Analysis. “The operators use MYCenter PRM to see what material is needed for the current job so they can prepare the material in advance, which significantly improves productivity,” says Andreas. “MYCenter Analysis gives them a live overview of the most important performance indicators on the pick-and-place machine, which makes it a lot easier to visualize operational data and discover potential performance improvements.”

FACING THE FUTURE

With the new production line in operation, Andreas and his team are looking forward to collaborating more closely with customers in developing and manufacturing their future product portfolios. “Our market is really facing two growing trends right now,” he explains. “On the one hand, there’s more and more transparency and comparability in international tenders, which makes it very important to maintain the right cost structure. On the other hand, the importance of reliable partnerships is also growing, especially among small- and medium-sized customers, so our collaboration with long-standing customers is certainly going to intensify.”

The automotive industry, Andreas explains, is an especially good example of the need for speed, quality and flexibility in electronics manufacturing. “In a lot of cases, ‘just-in-sequence’ delivery has become standard and is now working its way in to the regular industrial sector,” he says. “We also expect data networking to take hold, so that customers can see the status of their orders in real time. Now we’re well positioned to support both these trends as the pace of change continues to accelerate.”

“At the end of the day, we’re very excited that we can now set up and produce new jobs more quickly and more cost-efficiently,” Andreas concludes. “The new production line really enhances the product quality and expands our technological capabilities. Now that we have much higher capacity — both in terms of component range and throughput — we can increase the number of assemblies we produce and serve even more technologically demanding customers.” ●

Automated industrial dispensing for a rugged world.



Introducing the MYC60

It’s a rough world out there for industrial electronics. Which is why leading tier-one EMS facilities worldwide rely on the MYC60 Industrial Dispenser for their toughest structural, thermal, sealing, bonding and gasketing needs. Whether you’re producing automotive assemblies, 5G infrastructure or aerospace electronics, the MYC60 offers an all-in-one solution to all your demands for 24/7 industrial dispensing with the latest process controls. Learn how the versatile MYC60 can be designed to address your production requirements at mycronic.com

Automated industrial dispensing for a rugged world

The world is witnessing a massive rollout of heavy-duty boards. Whether for broadband infrastructure, new data centers or electric vehicle fleets, these electronics need reliable protection against an enormous variety of environmental stresses. This is where the MYC60 industrial dispenser comes in, enabling automated 24/7 dispensing of structural, thermal, sealing and bonding fluids across a range of industry applications.

TEXT: GRANT BALDRIDGE PHOTO: MYCRONIC

Life isn't easy for industrial electronics. One day it's the heat and vibration of an electric drivetrain. The next it's dust, rain and freezing temperatures at a mountain top 5G base station. Although the conditions vary, all these sensitive electronics share the need for long-lasting protection from the harshest operating environments.

DISPENSING THAT PROTECTS OUR WORLD
Electronic sensors, battery assemblies and other complex electronics are vital to the functioning of our society. On the road, they protect against collisions. In our communications grid, they keep us connected. And in an increasingly electrified world, they ensure non-stop supply of everything from electricity to industrial production. Industrial dispensing is our necessary safeguard when electronics simply can't afford to fail.

DISPENSE ANY MATERIAL
Fortunately, leading industrial manufacturers are already a step ahead, using the MYC60 industrial dispenser to solve their toughest structural, thermal, sealing, bonding and gasketing needs. Complete with precise, heavy-duty systems for one-component and two-component materials, the MYC60 can be tailored to process a wide variety of fluids for nearly any high reliability application.



TAKING THE HEAT OFF

Thermal interfaces are just one example of a fast-growing dispensing application. Whether it's odd-shaped components or dense battery arrays, the challenge is to dispense thermal interface materials in precise locations to maximize heat dissipation and prevent overheating. Thanks to the MYC60's advanced dispensing processes, manufacturers can apply nearly any thermal conductive material to any assembly with total control.

PROTECTING NOVEL DESIGNS

For the ultimate protection of intellectual property and fragile components, many producers increasingly pot or encapsulate entire assemblies in opaque fluids. From advanced sensors to proprietary designs, the MYC60 makes it possible to fully cast and seal off electronics from curious competitors as well as protect from heat, moisture and vibration.

BETTER BONDING

THT components can be particularly vulnerable to shocks and vibrations. By accommodating any variety of structural adhesives and dispensing angles, the MYC60 enables high-precision bonding that withstands the inevitable shocks of real-world environments.

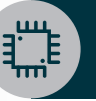
SEALING THE DEAL

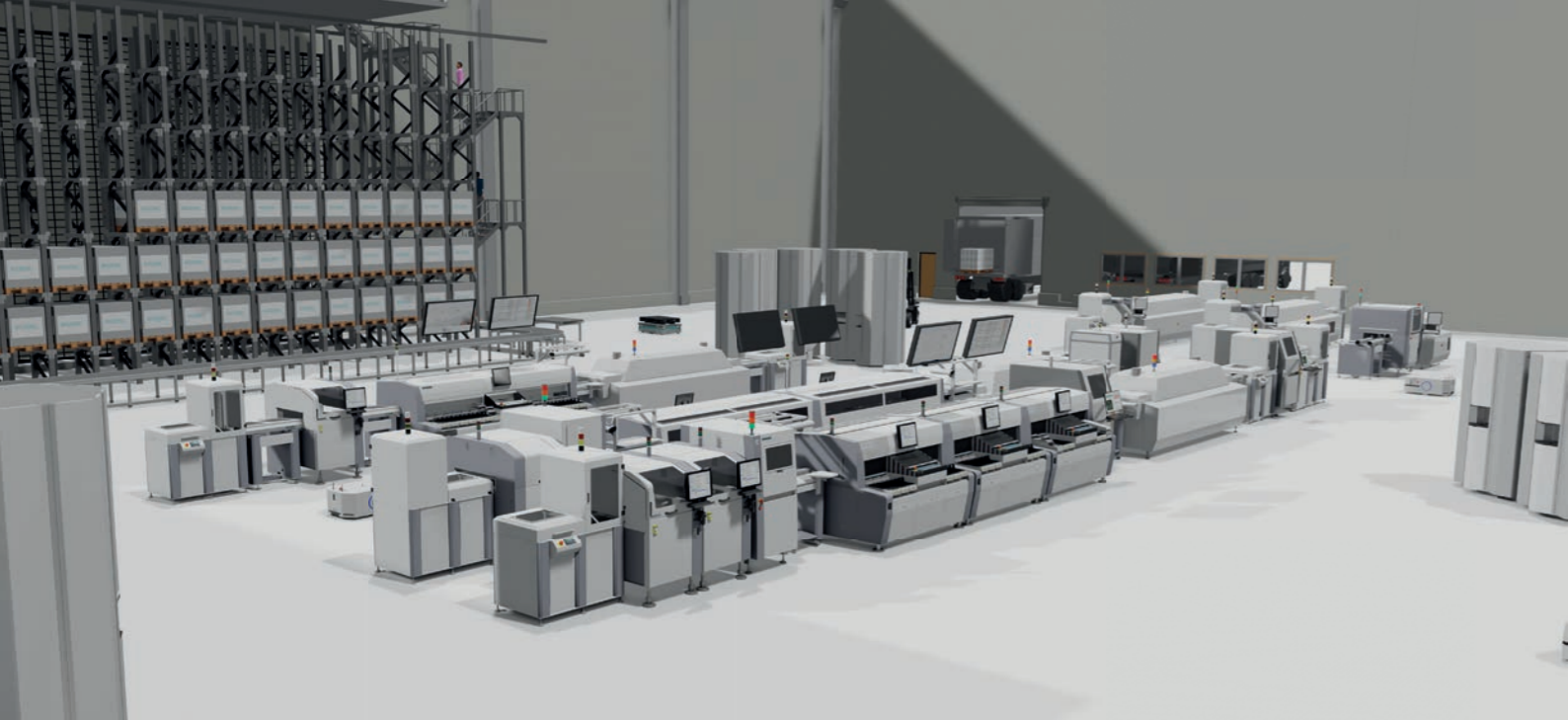
Regardless of the electronics inside, the sheer variety of shapes, contours and gaps remains a challenge for any assembly. Whatever the pattern or line requirement, the MYC60 can be easily programmed to apply precise seals and gaskets of virtually any shape — with better consistency and less manual effort.

CUSTOMIZED FOR ANY PRODUCTION ENVIRONMENT

Of course, technical features only count when they can fit seamlessly into ongoing production. Which is why the complete MYC60 system is always customized by Mycronic's process experts to meet the needs of the most demanding industrial operations. In-line or trolley systems ensure a seamless flow for assemblies with novel formats and dimensions. In-line pre- and post-weight conveyors guarantee precise material dispensing. And all process controls are managed through an intuitive point-and-click graphic interface, allowing operators of any skill level to program online or offline. The result is a versatile all-in-one solution for 24/7 automated dispensing, bringing new levels of protection to the world of ruggedized electronics. ●

Rugged boards are a requirement to keep our world connected. Here an operator inspects the fluid dispensed to protect the capacitors from vibrations.





Put tomorrow's workflows in your control.

With comprehensive process expertise, services and solutions for data-driven PCB assembly.

Ensure zero defects with the industry's highest utilization rates for any product mix thanks to Mycronic's fully integrated assembly solutions.

Embrace change.

Is your factory prepared?

In the electronics industry, change is everywhere. Bringing shorter innovation cycles. More product variants. And more complex process workflows. But for the most flexible manufacturers, every change is a new opportunity. A chance to put more value into every board, every process and every operator.

TEXT: GRANT BALDRIDGE PHOTO: MYCRONIC



IMPROVE FLEXIBILITY

Respond quickly to evolving technologies and fast-changing market demands with the industry's most agile PCB assembly solutions for any build schedule.



ENHANCE QUALITY

Stop defects at their source. Go beyond verification to consistently produce fewer defects, predict variability and dramatically reduce repair costs.



BOOST PRODUCTIVITY

Achieve higher throughput at lower cost with state-of-the-art PCB assembly solutions that make data more visible, processes more automated and people more productive.

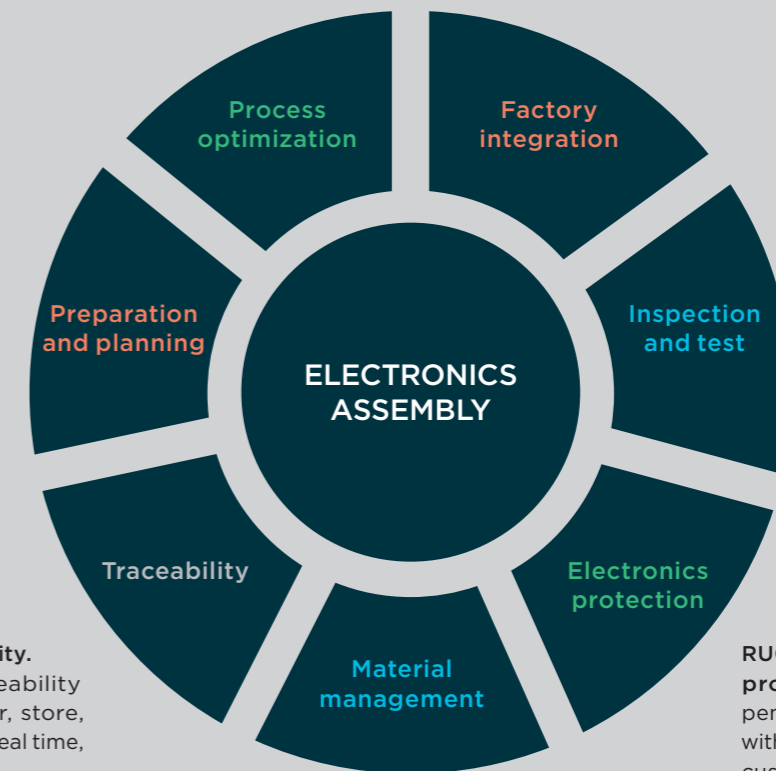
FASTER Process optimization.

Monitor, analyze and act faster with the right performance data for the right user at the right time.

SMARTER Factory integration.

Get comprehensive support for all your networking, connectivity and factory integration needs.

SIMPLER Preparation and planning. Make importing designs and managing product variation faster, simpler and more efficient.



POWERFUL Inspection and test.

Consistently improve product quality and first pass yield with the most accurate and easy-to-program inspection solutions.

ACCURATE Traceability.

Make accurate traceability data easier to gather, store, secure and access. In real time, or decades from now.

RUGGED Electronics protection.

Solve any dispensing or coating challenge with a comprehensive range of custom-ized in-line, tabletop and process control solutions.

SMOOTHER Material management.

Streamline your material flows and ensure 100% stock accuracy with industry-leading material handling and automation solutions.



Change is coming. Is your factory prepared?

More process data. Faster innovation cycles. Smarter factory systems. As the pace of change accelerates, we're convinced that tomorrow's PCB assembly environment should be a simpler place. A place where no build schedule is too complex. No defect goes unprevented. And no production is left standing still. From naked board to coated product - and everything in between.

Bring us your bottlenecks, your quality issues and your integration challenges. And put our process experts to the test. Together, we can build the future of electronics assembly.

MYCRONIC

User stories **MYCenter Analysis**



GET MORE FROM YOUR PICK-AND-PLACE PROCESS

How can you get the most out of your Mycronic placement process? With MYCenter Analysis, a next level of performance is in your hands. Mycronic enables you to increase your placement machine utilization and productivity. The MYCenter Analysis dashboard and statistics software offers powerful new ways to act on production data, improve process performance and reduce operator intervention.

The issues that manufacturers can experience are component mispicks, an interest to enhance production volume or the complexity to identify the sources of component rejects and waste, which all too often involve complex root-cause analyses.

Learn how other manufacturers are using MYCenter Analysis to drive higher pick-and-place productivity in the following case studies.



Analysis made easy

Taking actionable data from the production floor to the desktop

TEXT: GRANT BALDRIDGE PHOTO: RACOM

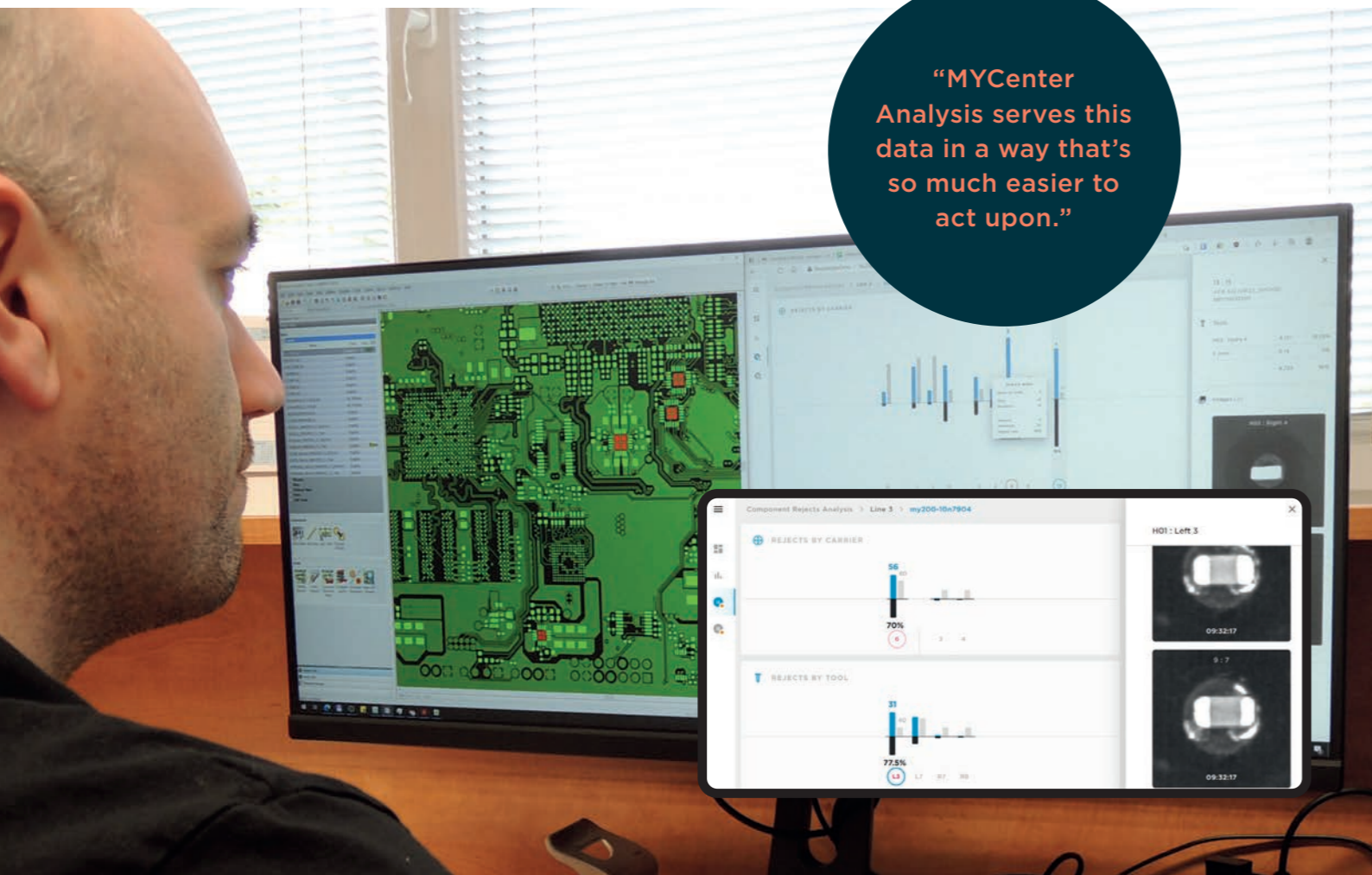
For a savvy production manager, it's always possible to get the right troubleshooting data from your pick-and-place machine — if you have plenty of time and energy to spare. Thanks to MYCenter Analysis, the supervisors at one electronics manufacturing facility can get the statistics they need at a glance, without ever leaving the office.

Racom, with its dedicated technology center for SMT and hybrid assembly based in central Czech Republic, is focused on the development and production of equipment for wireless data transfer. As a specialist in small batches of complex boards, with cycle times averaging up to fifteen minutes, the company relies heavily on production managers with a passion for problem-solving.

BRINGING DATA TO THE SURFACE

“When overseeing production I'd typically have to investigate the data behind any rejects or stoppages in a web interface, which wasn't particularly user-friendly,” explains Jaroslav Pernica, Production Leader at Racom. “MYCenter Analysis serves this data in a way that's so much easier to act upon. Just by looking at the screen in my office I can see whether I need to go down to the production floor to check for specific errors.”

“MYCenter Analysis serves this data in a way that's so much easier to act upon.”



PATTERN RECOGNITION

More than just simplifying an average workday, the software's dashboard reveals patterns that lead to earlier and faster problem resolution. “What used to take ten or twenty minutes now takes a few seconds,” says Mr. Pernica. “And when it's a product we produce fairly regularly, I can see much further in advance if something has changed. It's actually pretty simple: it's an easy-to-use off-the-shelf tool that saves me from having to dig through the data, machine by machine, on my own.”

SHOWING THE WAY FORWARD

For his colleague Zdeněk Bednařík, who is responsible for long-term production improvements, the reports generated by the MYCenter Analysis dashboard are particularly useful. “In the past, I would have to guess what the production bottleneck might be just based on experience,” says Mr. Bednařík. “Now it's visible for everyone. I can just bring up the reports and explain the changes we need to make to improve utilization. This makes it so much easier for everyone to be on the same page and devote their time to the right things — after all, it's hard to argue with the facts.” ●

Putting performance data to work

Enhancing reject analysis and line balancing with MYCenter Analysis

TEXT: GRANT BALDRIDGE PHOTO: DF ELETTRONICA

As an innovative European contract manufacturer, DF Elettronica is determined to continually push the limits of automation. Whether it's inspection, traceability, material transport or process optimization, the application of highly advanced technologies has been central to the company's successful production strategy for many years. MYCenter Analysis is just the latest in the ongoing pursuit for the optimal high-flexibility production environment.

Located on the northern outskirts of Florence, Italy, DF Elettronica is a relatively small EMS with a staff of just over thirty. But by combining the right people with the right production technologies, the company punches well above its weight, serving a diverse range of leading European biomedical, lighting and telecom customers.

INVESTING IN AGILITY

“Our owner is a strong believer in factory automation and the application of advanced technologies,” says Patrizio Sorace, Production Manager at DF Elettronica. “He was early to invest in a vacuum chamber oven, which was a crucial strength in the manufacturing of high-quality LED lighting systems. When he saw too much time spent moving racks of PCBs from SMT to final assembly, he invested in autonomous transportation systems. The same is true for 3D inspection, laser marking systems and flying probe testing, all of which have paid off for our customers. So when he heard of MYCenter Analysis, he immediately saw its potential to save a lot of time and effort.”

“Sometimes it is difficult to see the bigger picture. That's where software like this can make a difference.”

Down on the production floor, the most immediate need was for better visualization of pick-and-place performance data. “When it came to machine balancing, we wanted a quicker way to understand where we could make potential improvements,” says Mr. Sorace, explaining that this was especially true for their large batch production line. “Some of these batches can occupy the line for several days, so even five or six seconds gained per board is pretty significant.”

The other objective was to more rapidly identify the sources of component rejects and waste, which all too often involved complex root-cause analysis. “We’d ask ourselves: Is this a feeder problem? Faulty package design? A dirty or broken nozzle?” says Mr. Sorace. “There are tons of variables, so what we really wanted was some kind of statistical analysis that would tell us whether a majority of the problems were related to a specific nozzle, or component for example.”

THE POWER OF ANALYSIS

Given an opportunity to beta-test MYCenter Analysis, Mr. Sorace and his team leapt at the opportunity. “We were really happy when we received the first release of MYCenter Analysis,” he says. “This was exactly our goal: to get the statistical analysis we needed for operators to find the reasons for any reject problems. Now they can just click to find the images of a nozzle that needs cleaning and very quickly draw the right conclusion. Or they might use it from home to identify a problem nozzle, for example. Of course everything’s not solved, but we’re certainly making improvements.”

SEEING THE BIG PICTURE

As with many smaller factories, Mr. Sorace and his colleagues have a wide range of tasks. As production manager, Mr. Sorace oversees the infrastructure, monitoring overall machine performance and potential workflow improvements. At other times he might assist on the production line, creating

packages and performing other technical duties. “This is typical for a factory like ours,” he explains. “We’re all so occupied with multiple machines and processes that it can be difficult to see the bigger picture sometimes. That’s where software like this can make a difference, giving us the statistical overview we need.”

In the future, the company’s owner has proposed giving an advisor off the line a bigger role in production monitoring and improvements — a responsibility most likely to fall to Mr. Sorace and MYCenter Analysis. “Our operator simply has too much to do,” Mr. Sorace says, “So now I can use the software to support him. I can easily see a scenario where a high-volume job comes in, each line has its own dedicated operator and someone outside the lines focuses on production monitoring, analysis and improvement. This is what we’re aiming for.”

BOOSTING PERFORMANCE

When asked to quantify the benefits of MYCenter Analysis, Mr. Sorace admits that this can be a challenge in high-mix production, where the aim is to gain more and more control over an endless range of variables. “Our production varies so much from job to job that it’s really difficult to do any kind of before-and-after comparison,” he explains. “And this year is a total anomaly due to the pandemic, so any comparative analysis wouldn’t be very realistic. But our experience is that MYCenter Analysis has helped us a lot, especially in terms of reject analysis and line balancing for bigger jobs. In the long run we’ll definitely use it to set more data benchmarks, and to compare historical data with current performance. If we can continue to increase automation, improve our ability to change very quickly between jobs day-to-day, and serve a lot of customers very quickly with high quality and the lowest possible cost, then we know we’re headed in the right direction.” ●



Surprising insights MYCenter Analysis reveals new improvement possibilities

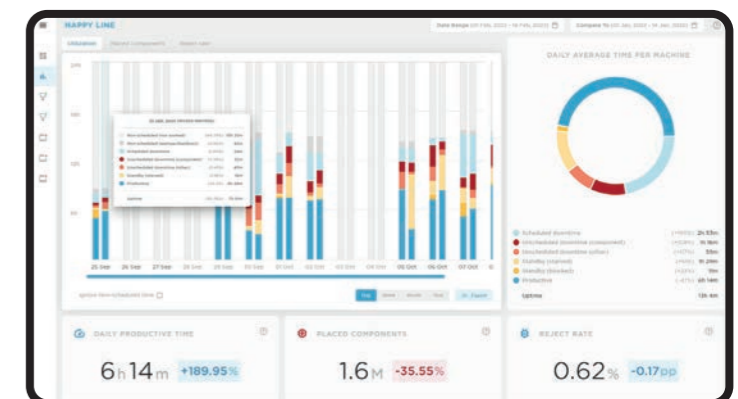
TEXT: GRANT BALDRIDGE PHOTO: MYCRONIC

For Allelektronik in southern Sweden, the new MYCenter Analysis dashboard came as a real eye-opener. Having spent more than a decade optimizing production for a single customer, Production Manager Mats Landström was thrilled to see things from an entirely new perspective. “We really didn’t know if the software would be useful at first,” he says. “Now we can’t live without it.”

Like many manufacturers, Mats knows his production line inside and out. At the same time, he was curious whether there might be room for further improvement. “It’s easy to get a bit too close to your machines and think you’ve optimized them in every way possible,” he says. “Still, I wondered: could there be something we’re missing?”

VISUALIZING LINE PERFORMANCE

Three months later, he continues to find new answers to this question every day with the help of MYCenter Analysis. “When you see it visually on the screen, it’s obvious where the problem is. It’s much quicker to see if a line is underperforming.”



“There’s usually three of us on the floor with the dashboard up on a big screen,” he continues. “So while you’re changing a reel or something you can check the dashboard and see rejects, utilization, and so on. We really try to get the most out of everyone’s efforts, including my own, so with this software we can all multitask and keep an eye on things.”

FASTER PROBLEM-SOLVING

On the biggest jobs, the ability to quickly identify the causes of rejects alone can save the company’s operators a considerable amount of work. “It’s saved a lot of time for our operators,” says Mats. “Instead of searching for specific problems they can focus more generally on maintaining the line. With a big batch of, say 3,000 boards, you could maybe save three hours if you’re not hunting for problems. Add that up over a year and it amounts to a lot of time.”

OPTIMIZING FOR THE FUTURE

Now that the MYCenter Analysis dashboard is integrated into his team’s daily routines, the insights it has revealed have caused Mats to rethink the configuration of his production line in the long term. “Our MY300 Trilogy line is considerably more stable now,” he says confidently. “Any imbalance in the line is more visible, and now we have a better understanding of which capabilities are needed in each machine. This is really a big help as we plan for the future. ●

“When you see it visually on the screen, it’s obvious where the problem is. It’s saved a lot of time for our operators.”



Double up on smarter storage

Introducing the industry’s most compact near-production storage system

Looking to squeeze more profitability into the same floorspace? Now you can. With the new MYTower series X, you can reach the highest levels of component storage automation at up to 1,000 reels per square meter. Thanks to a breakthrough inventory system, it offers the same advantages as previous SMD Towers with as much as double the storage density. All so you can pack more performance into less space and keep massive volumes of reels, trays and tapes always close at hand. Learn how the new MYTower series X can help you make the most of every square meter at mycronic.com

A showcase stockroom

How intelligent material handling can win customers and grow your business

In the world of rapid prototyping, speed and accuracy are everything. And everything starts in the stockroom. Based on this insight, California-based XLR8 has built a strong reputation for best-in-class material flows thanks to a comprehensive integrated material handling system from Mycronic.

TEXT: GRANT BALDRIDGE PHOTO: XLR8

A stockroom is typically the last thing you'd show to customers, if at all. But for XLR8, an award-winning contract manufacturer of high-reliability electronics, this is where every customer visit begins.

"We get two or three customer visits a week," says owner and co-founder Jason Powell, "and we always start here with our 12 MYTower storage systems, our hundreds of Smartboxes and the more than 50,000 components we have in stock. It's not just our customers that tell us it's one of the best stockrooms they've ever seen — some of our competitors say it, too."

A CLEAR SIGN OF QUALITY AND EFFICIENCY

By the end of a tour an aerospace, defense or medical customer can rest assured that their production is in good hands. What these customers know is that the state of a warehouse can tell you a lot about a manufacturer, from its labor efficiency and technological capabilities to its security and traceability protocols. This is especially true for a company expected to produce up to a dozen unique prototype runs, with two to three jobs on each of four lines, every day.

"With this setup we try to eliminate every possible human error and inefficiency," Jason explains. "The lines tell the towers when to prepare new reels, which is a huge time-saver on retrieving material. Our products provide full date code and lock code security, so no one can just grab the material. And our customers heavily require First-In-First-Out (FIFO) principles. In the MYTowers, FIFO is simply a no-brainer — it's impossible to make a mistake."

WORKING SMARTER, NOT HARDER

Over the course of just four years, XLR8's material handling has evolved from a single MYTower to a sophisticated showcase of best practices in stock management. What began as an effort to reduce kitting time and free up floorspace now ensures a seamless material flow for 200 unique customers with up to 12 jobs in production every day.

"When one job is finished, there might be five or six more waiting to go," says Jason. "This involves a huge amount of preparation to make sure the lines don't stop. And without the MYTowers, we would never be able to manage it with our current staff. I'd need to hire ten more people for stocking and kitting, at least. Our customers understand this when they see it firsthand." ●

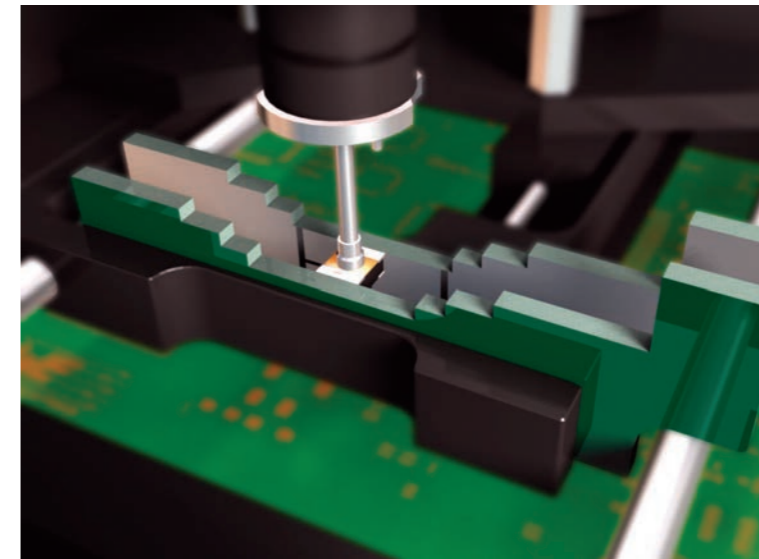


"With this setup we try to eliminate every possible human error and inefficiency."



APJ1000S jet valve

If you're looking for speed you should not miss the fastest all-material jetting system on the market today, using the completely new APJ1000S jet valve on the MY700 Jet Printer. The APJ1000 also enables all fluids to be dispensed at nearly any height or volume.



MY300 Electrical Verifier

Mycronic is launching Generation 2 of this pick-and-place machine option, improving the accuracy and component range in several respects: Added support for FET transistors, IGBT transistors and dual diodes in 3-pin packages. Better accuracy and extended range for capacitors. Extended resistor range up to 100 Mohm.



MYPro I series 3D AOI

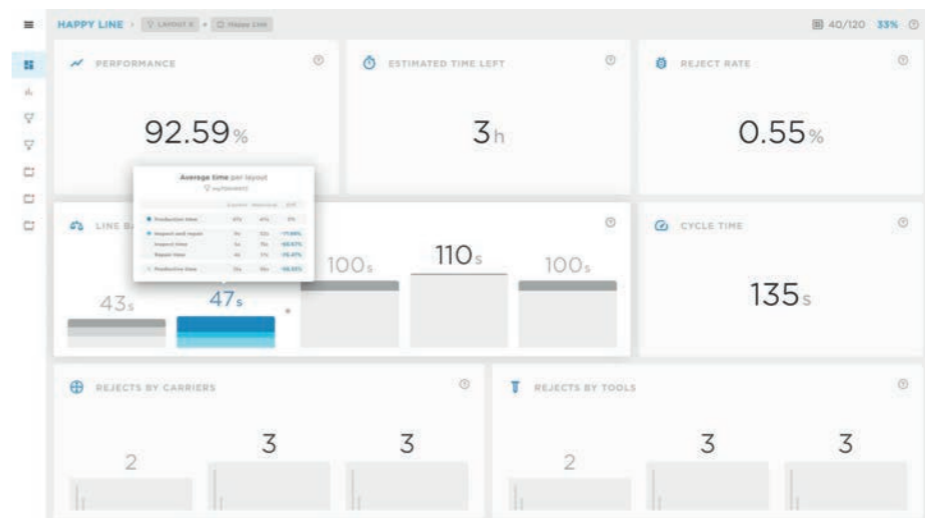
Regardless of production volume or number of changeovers, the new MYPro I series 3D AOI offers one of the most powerful AOI technologies on the market now powered by AI-assisted software for up to 30% faster programming and more user-friendly operation.

MYSmart MYC60

Manufacturers of 5G networking technologies, data centers, electric vehicles or similar heavy-duty boards will benefit from the MYSmart MYC60 industrial dispenser. This highly robust machine is already relied on by leading tier-one EMS facilities for automated 24/7 fluid dispensing of structural, thermal, sealing and bonding fluids.

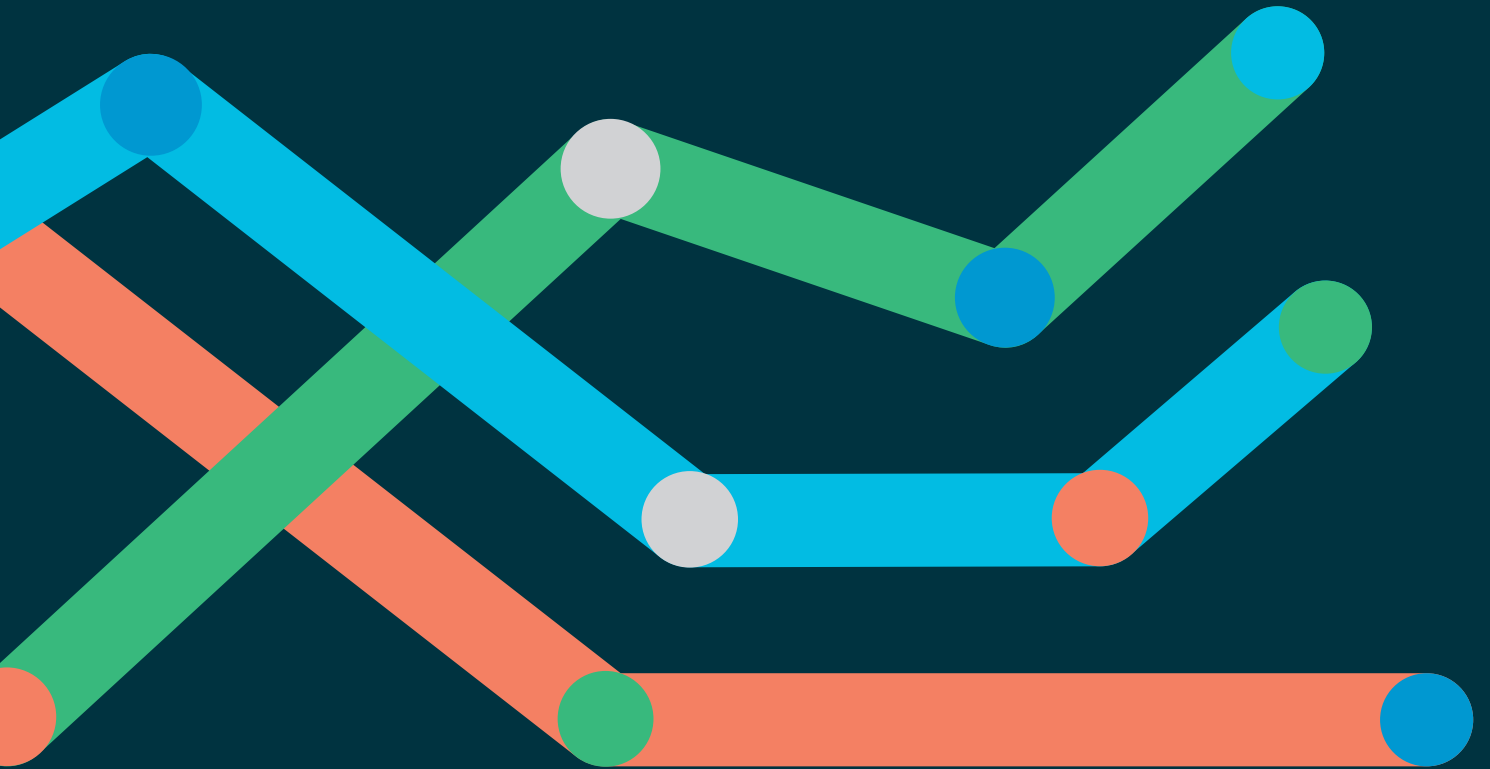
Agilis Flex Generation 2

Mycronic has now released the new and improved Generation 2 of the Agilis Flex feeders. The feeders have been mechanically modified in several ways in order to further improve reliability, durability and user friendliness.



MYCenter Analysis now supports Jet Printers

The release of MYCenter Analysis 1.6 is the sixth release since the software was launched in Q2 2020. Major new features of this release is the support for Jet Printers. The Jet Printers are included in the line balancing in the dashboard view.



Change is coming. **Is your factory prepared?**

More process data. Faster innovation cycles. Smarter factory systems. As the pace of change accelerates, we're convinced that tomorrow's PCB assembly environment should be a simpler place. A place where no build schedule is too complex. No defect goes unprevented. And no production is left standing still. From naked board to coated board – and everything in between.

Bring us your bottlenecks, your quality issues and your integration challenges. And put our process experts to the test. Together, we can build the future of electronics assembly.

MYCRONIC