The MYDATA APM Software Suite:

Smarter tools for Assembly Process Management
Intelligent software for a complex environment

With the rising complexity of SMT production comes a greater need for quality data. High part number count, a wide variety of boards, and an ever-changing production schedule are constant challenges that only the most intelligent software can handle. This is why MYDATA’s assembly process management software is tailored for the most complex manufacturing environment imaginable.

With the richest software suite in the industry, developed largely in-house, MYDATA provides fully integrated applications covering the entire chain of SMT assembly. Our software tools increase utilization, boost efficiency, improve service level to your customers, and impact your bottom-line. Whatever your role in the production process, our software suite puts you in complete control of your factory’s information handling.

Stable, secure and simple to use
MYDATA software has a proven track record for unparalleled stability, data integrity and user friendliness. Our system is designed to support integration, multiple users and parallel processes, using open interfaces and state-of-the-art software technology. All of this makes our software suite easy to connect, easy to adapt and easy to use.

Connectivity is key
In a fast-moving production environment, it’s vital that data generated in one step of the process immediately becomes available to all other assembly functions. By providing an integrated system for planning, kitting, production and storage, MYDATA software provides the full perspective you need to make critical decisions and improvements.
MYDATA APM Software Suite

Smart tools for Assembly Process Management

MYDATA’s APM software suite follows the steps you would normally take in the assembly process. This makes it both intuitive and simple to use for everyone involved.

Data preparation
Typically, various part-numbering systems, CAD and BOM formats lead to time-consuming conversions and revisions. Not anymore. Our software gives you the tools to make conversions automatic and error-free.

Optimization and Scheduling
Before last-minute changes and delayed component deliveries bring production to halt, make sure you have the software you need to ensure maximum equipment utilization. With MYPlan’s Job Sequence Optimizer, you’ll have one of the industry’s most powerful optimization algorithms at your disposal.

Line Control, Monitoring and Material Handling
Continuous optimization requires accurate real-time data. This is why MYDATA software ensure that every feeder and individual component is scanned, registered and made searchable for all applications throughout your assembly line. You’ll keep more accurate track of inventory and reduce the risk of human error.

Traceability
For capturing traceability data and making it searchable, MYTrace can be configured to best fit the way your process works. Whether you need it today, tomorrow, or 20 years from now, traceability data is collected from each machine in your production line, or multiple lines, and stored on a file server. The data is in a secure location and always easily accessible, so you also have the flexibility to migrate to new software or hardware platforms in the future.
Error-free data preparation

Within seconds, MYDATA’s MYCam software converts all types of CAD and Bill-of-Materials information into ready-to-run jetting and pick-and-place programs. Once imported, graphic rendering of the CAD image is checked for errors and can be edited as required. The fastest, easiest and most comprehensive visual documentation system for electronic assembly, MYCam also offers instant engineering change implementation across the entire document set.

Visual documentation
MYCam includes fully automated and configurable color-coded tables, artwork storage and sharing across workgroups of engineers. As well as complete video and audio support, OLE embedding, clipboard and undo, a host of drawing tools come as standard. Beyond expediting the initial documentation set development for a product, MYCam’s design enables instant change implementation across the entire document set.

Enter data offline
Library data and programs can be created entirely offline for one or multiple MYDATA machines as well as for other SMT equipment. Verified and up-to-date information can then be sent over the factory network in time for production start.

Angle normalization
Depending on your needs angle normalization can be achieved through any of several methods. The first involves a geometric comparison and corporate angle database, which becomes more intelligent with use to ensure consistent dissemination of part angle. Another option allows you to establish automated offset tables, while a third enables the establishment of angle correction directly within the machine programming interface, thereby automatically resolving the angles specific to each pick-and-place machine.

Key benefits:
• Converts all major CAD formats
• Generates programs and instructions for the entire assembly line
• Links components to packages using CAD shape comparison wizard
• Uses the factory model to specify processes in each of your lines
• Verifies orientation and package definition with CAD background

The New Component Setup wizard visually presents CAD shapes and TPSys packages side-by-side and intelligently ranks suitable package candidates for new part numbers.

The CAD background functionality makes it easy to verify component rotation and package definition.
Whether your goal is to minimize changeover time, maximize throughput or achieve a better balance between the two, MYDATA’s production planning software makes it easy to perform feeder and job sequence optimization throughout your assembly line. Whatever your priorities, MYPlan will automatically calculate and predict assembly time, kitting and changeover procedures to maintain optimal efficiency.

Powerful optimization software
Unpredictable workloads, last-minute engineering changes and delayed component deliveries – all of these make SMT production scheduling a daily challenge. Fortunately, the Job Sequence Optimizer from MYDATA is designed to simplify this challenging environment. An optional feature within MYDATA’s MYPlan software, this powerful optimization algorithm calculates the best production sequence and changeover strategy for any mix of products and batch sizes. Built to help SMT manufacturers respond quickly to changes while maintaining the highest possible uptime and throughput, MYPlan eliminates unnecessary feeder movements to help save both time and resources. This is achieved by combining traditional feeder optimization and line balancing with powerful software that minimizes changeover times and reduces operator time.

<table>
<thead>
<tr>
<th>Name</th>
<th>Batch size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job A</td>
<td>20</td>
</tr>
<tr>
<td>Job B</td>
<td>25</td>
</tr>
<tr>
<td>Job C</td>
<td>10</td>
</tr>
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<tr>
<td>Job E</td>
<td>3</td>
</tr>
<tr>
<td>Job F</td>
<td>50</td>
</tr>
<tr>
<td>Job G</td>
<td>10</td>
</tr>
<tr>
<td>Job H</td>
<td>80</td>
</tr>
</tbody>
</table>

MYPlan calculates an optimized job sequence based on all released work orders.

MYPlan’s comprehensive pick list includes each component’s last known location according to MYLabel’s location tracking system.

Optimized sequence

- Current kitting
- Min. feeder loading (Job E)
- Min. assembly time (Job H)
- Family Kit (Job F + Job C = Job A)
- Many parts common with current kitting
- Many common parts within these three jobs
- Large batch - fully optimized feeder setup

Line stoppages due to material shortages can be avoided by using MYPlan’s quantity verification tool.
Improved control for a fast-changing industry

Continuous monitoring and control are essential to reducing human errors and maintaining a competitive edge. This is why MYDATA software is developed to provide real-time, factory-wide overviews of your entire production facility.

Non-stop line control
MYDATA’s fully automated high-mix production environment is possible thanks to highly advanced line control software. With TPSys, you can maintain high throughput and reduce the risk of mistakes with early low-feeder warnings, package autoteach, electrical verification and shared databases. Based on a highly reliable, multi-tasking Linux platform, the software makes it possible to download files and perform backups without ever stopping production. To preserve data integrity, TPSys is equipped with a user access system with password protection, single-point data storage and automatic network backup. Even if the central data server happens to fail, machines can continuously produce PCBs with the help of backup from a local database.

Zero changeover time
Our unique FlowLine system eliminates changeover time. Machine programs are selected automatically for each work order and every piece of equipment in the line will adjust its settings without the need for operator intervention. With changeover time eliminated, batch sizes can be optimized for downstream operations such as box build and test.
Smarter, more accurate material handling

MYLabel PRM (Proactive Replenishment Monitor) both improves uptime and ensures correct material delivery to your SMT assembly line. Together with the SMD Tower storage solution, the replenishment process becomes completely automated.

Using barcodes to track components and carriers, MYLabel helps to reduce the risk of errors while significantly reducing setup and changeover times. It keeps track of quantity, batch code, current location and floor life – for each and every component. With better accuracy comes better inventory management. By tracking the quantity of each individual carrier, MYDATA’s material handling systems make it possible to remove the quantity divergence associated with traditional stock systems that track only nominal consumption. In many cases annual stock takes can be eliminated entirely.

Efficient changeovers

STEP 1 – PLANNING
Optimize your job sequence and changeover strategy for incoming orders. The resulting Bill of Materials are then sent directly to the SMD Tower for automatic delivery in correct kitting order.

STEP 2 – KITTING
Load the feeders without the need for manual data entry – just two barcode scans are required. Material outside the SMD Tower is quickly located through a tracking system based on location labels.

STEP 3 – ASSEMBLY
With the FlowLine system, machine programs are selected automatically, as are conveyor width and loader/unloader settings. As soon as the line is up and running, you’re free to start kitting for the next job.

STEP 4 – REPLENISHMENT
Components that are about to run out are displayed well in advance by the PRM software. Simply click the “provide” button and the SMD Tower will immediately deliver a new reel.

STEP 5 – DEKITTING
Dekitting a MYDATA line couldn’t be simpler. Just unload the feeders and place the reels back into any of your SMD Towers. Since each reel has its own unique identifier, mix-ups are virtually impossible.
Gather traceability data in seconds. Store it for decades.

MYDATA’s MYTrace software captures traceability data and makes it searchable so it can be configured to any operator process. PCB batch IDs or individual IDs are automatically scanned using the machine’s fiducial camera, a conveyor-mounted scanner, or a hand-held barcode scanner. The choice is yours.

Operating on a modular system, MYTrace allows the harvester, viewer and database to be changed and adapted over time without losing data that was previously stored. Prior data not only remains accessible as updates are installed – it’s also invulnerable to hard drive crashes and ever-changing data formats.

How it works
The process is simple: The harvester collects traceability data from each machine in your production facility and stores it on a file server for safe archiving. The server is protected using standard backup routines, and because the data is stored securely and easily accessible, you always remain flexible to migrate to new software or hardware platforms as the need arises.

Data extracted from the file server populates a database that can be used to access the exact information you need in a variety of available formats, including PDF, XML and HTML, depending on your requirements. Should your database crash, it’s simply a matter of re-installation, at which point the harvester will automatically re-populate the database with data archived on the file server. Whether you need it today, tomorrow or 20 years from now, data such as faulty PCBs can be quickly retrieved using the MYTrace web-based viewer application.

Store data safely for decades
MYTrace is a Windows-based traceability software program developed for secure, long-term storage of traceability data. Information about component placement is safely stored for easy searching and reporting, making it possible to identify all PCBs that are affected by factors such as faulty component batches.

Extract traceability data in seconds
This fully automated system allows electronics manufacturers to quickly and easily trace mounted components on printed circuit boards to help save both time and resources. MYTrace is future-proof, modular and application-independent. Because it doesn’t rely on any particular database technology, it provides a unique and unparalleled level of data security.

Cut response times to a minimum
Just type in part numbers and batch codes, and MYTrace allows you to extract traceability data in seconds rather than hours. In most cases, it takes less than a minute to search through several years of production data and generate a report. If you produce hundreds of thousands of PCBs, the impossibility of manually archiving and tracing data makes this feature indispensable. And when it comes to customer reporting, best practice procedures and quality assurances are easy to generate on demand.
This is all possible thanks to open, local databases, from which data can easily be retrieved at any time – before, after or during batch production. With one integrated set of data stored and shared across the entire production process, production lines can achieve new levels of efficiency and flexibility. This, in turn, means better customer value and increased profitability.

Reliable, simple, secure
Software programs such as MYTrace are both modular and future-proof. By storing data in an application-independent format that doesn’t rely on any particular database technology, the advantages in terms of data security and flexibility are entirely unique within the industry. And MYTrace is just one example, since all MYDATA software is designed with the same principles in mind: reliability, security and easy access. Open databases, whether in TPSys, MYLabel or MYTrace, make integration simple and stable, regardless of the formats of your existing solutions.

Boost performance with fully integrated solutions

MYDATA offers the richest software suite in the industry, with integrated applications covering the entire range of SMT assembly. All software is designed to provide a single set of reliable, searchable data, allowing you to improve utilization, efficiency and customer responsiveness more easily than ever before.

Factory-wide connectivity is crucial to making information available anytime it’s needed. To ensure accuracy and real-time access, MYDATA solutions make sure that component information and production data is registered just once, stored securely and made immediately available to all potential users in planning, kitting, production and testing, as well as within factory-wide ERP and management reporting systems. With this real-time data access, you can build local intelligence into your equipment, allowing continuous, automated process optimization.

Integrated, automated data processing
Easy connectivity and integration are the backbone of MYDATA’s fully automated production solutions. With single-point data storage and automatic network backup, TPSys line control software is capable of ensuring non-stop production even if the central data server happens to fail.

The MYLabel material tracking software can help avoid the quantity divergence associated with traditional material planning systems. Left: stock accuracy when counting nominal consumption + average waste. Right: stock accuracy with MYLabel.

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Software support straight from the source.

The full MYDATA software suite has been developed by listening to our customers. All support applications, training and services are designed with a close ear to your needs. Have questions or issues to resolve? Why not ask the developers directly?

Global support, 24/7

When it comes to constantly improving our software, your feedback is the most important input we receive.

We offer advanced web support, on-site startup assistance and our global support lines are open 24/7. We’re always on hand to help – wherever you are in the world.

To get the most out of your investment, you’ll have access to the best possible resources for your support inquiries: the software developers themselves. This means faster, more effective response so that your production line never has to wait.

MYDATA ensures:
• Fast installation and deployment of solutions within your facility
• Rapid learning through effective training
• Quick and accurate response from all our technical support staff

Our global services include:
• Installation and upgrade support
• Technical support, including diagnosis and assistance, via remote connection to your machine
• Training support
• Application support
• Interactive web support