Automate Production

PCB-Investigator FABRICATION Version
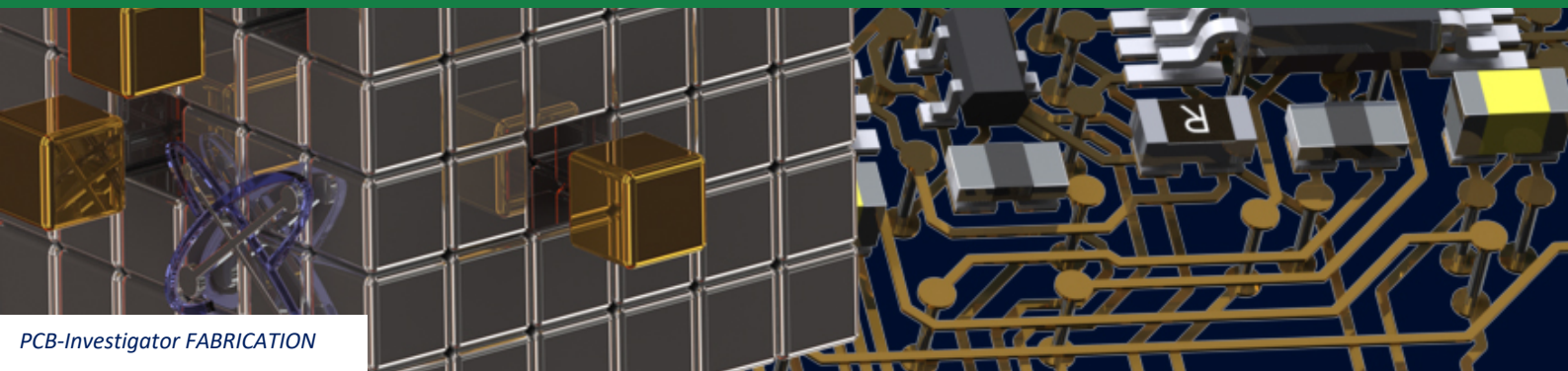
➔ You are looking for a tool that supports you in guiding and monitoring the production for bare boards and assembly?

➔ You want to play it safe and guarantee 100% producibility at all times?

➔ You are striving to automate processes in order to effectively shorten the time to market?

Then…

Then the edition FABRICATION of PCB-Investigator is exactly the right choice for your specific needs. Particularly production planners, EMS provider and PCB manufacturer appreciate FABRICATION for its reliability, the possibilities of automating work processes and its specialized applicability in manufacturing issues.

The FABRICATION version includes all tools you need to prepare, manage and monitor production, so that you can provide a more reliable and consistent production result while shortening time to market and lowering costs for your customers.

Find possible error sources before you start production and avoid unnecessary additional costs - using FABRICATION you can accomplish this task easier and faster than ever before!

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As a production planner...

you are responsible for the foresighted planning and supervision of complex production processes in areas such as electrical or mechanical engineering for e.g. control units, SMD/THT production lines. You are constantly challenged to ensure that production is supplied on time and thus you must always keep an eye on the maximum capacities of your production. Definition and optimization of production processes is of utmost importance to meet deadlines and satisfy the requirements of your customers. However, time to market is not the only factor that plays a decisive role. After all, products delivered on time, but not meeting the quality requirements of your customers, are also - as you know best - considered to be more than dissatisfying and can lead - in worst case - to a termination of business relations.

Smooth workflows!

For this reason, a smooth workflow will always be the target of your efforts. Simultaneously, this requires a well-organized cooperation with the design department and the production itself. Ultimately, it is usually primarily your responsibility to approve and monitor production orders. Automating recurring processes to make work easier and faster while maintaining quality can help you to manage your day-to-day work even better. This will not only satisfy your management team, but also your customers.
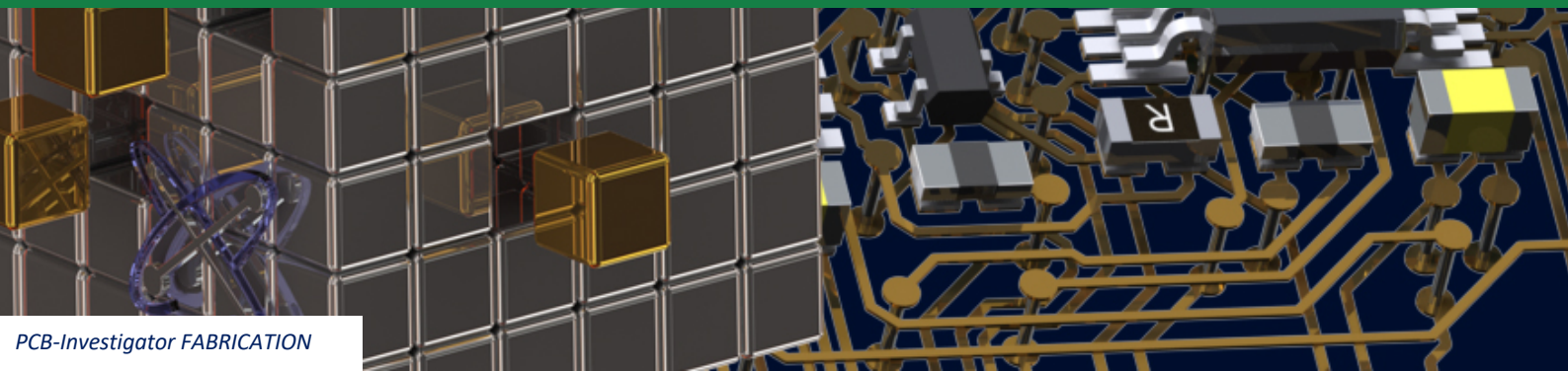
Providing support where it is needed

PCB-Investigator FABRICATION can help you do just that, because it was designed as a specialized software exclusively for electronics manufacturing. Our tool not only offers you numerous plug-ins, which are tailored to your needs as a production planner, but also features that facilitate cross-departmental work. With FABRICATION you can guarantee that all participants in the work process are up to date at all time. Misunderstandings, which can cause unnecessary costs and superfluous time delays, are thus avoided in good time.
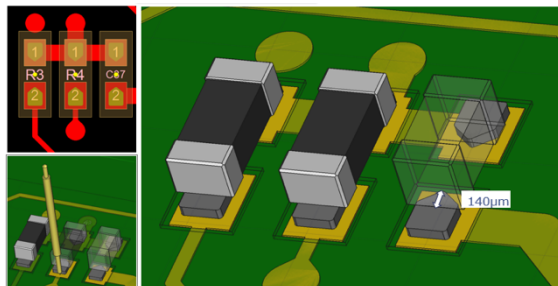
Design for Manufacturing

As a production planner, the term DFM and the underlying design philosophy are your daily companions. The ultimate goal is to manufacture a product as simply as possible. In the design phase, all possible difficulties are taken into account that could possibly occur in the later production process and lead to delays in production. By avoiding these difficulties in a targeted and constructive manner, a product that can be manufactured very cost-effectively is ultimately created. As a production planner, however, you often receive finished designs and adjustments may not always be feasible. Nevertheless, you can draw attention to possible sources of error even before production. At which point do you need to take a closer look? Are there any critical points? The Edition FABRICATION and the plugin DFM Analysis helps you to expose such aspects and discover them before it is too late so that everything runs smoothly when assembling your printed circuit board. Avoid unpleasant surprises!

Guarantee the producibility of your designs!

Use our plugins, such as the Design Rule Check, to check if your design can be produced as intended or if any errors or problem areas can be spotted. Play it safe and not only reduce the failure frequency but also the production costs. Ultimately, you can bring your product to market more quickly by carrying out a preliminary check, as there is no need for queries due to discrepancies on the part of the PCB manufacturer. We already provide you some pre-defined inspection rules for this purpose, but you are also able to add further rules at any time depending on your requirements or or the ones form your customers. So you are able to check the complete design for producibility within a few seconds and effortlessly! As a production planner, you can thus further optimize processes and meet deadlines without any problems, while at the same time improving the quality of products even more - without additional effort, but completely automated. In addition, the FABRICATION edition offers numerous other plug-ins that support you in your daily work, such as Tombstone Analysis, Stencil Analysis, AOI Analysis and Hazard Analysis.

Stencil Analysis – realization at the „Digital Twin"

As an EMS provider or PCB manufacturer…

you work for a professional service provider for Electronic Manufacturing Services (EMS). You offer a wide range of services, starting with SMD and THT assembly, automatic optical inspection (AOI), the production of prototypes, up to the complete assembly of components. Development services such as the optimization of layouts according to production aspects, EMC optimization or the design of electronic circuits are also part of your wide range of expertise. At the same time, your customers always expect the highest quality, a reliable and on-schedule delivery as well as an open communication. Continuous optimization efforts are indispensable in order to meet the ever-changing demands of your customers and the ever-present time pressure. You are in constant competition with other manufacturing service providers or PCB supplieres and have to succeed in order to maintain or at best increase the level of orders. Manufacturing cost-conscious products is thereby an essential prerequisite you always have to focus on!

Customized software solution

Thanks to our Edition FABRICATION, which is specially designed for PCB production, you will receive exactly the tools you need for a quality-promising production. Even in the PCB production, PCB-Investigator can support or even take over workflows. We help you to automate or facilitate processes to achieve your goals more quickly. FABRICATION therefore contains exactly the right suite of features you need to get your products ready for production or to take a final quality check on the design.
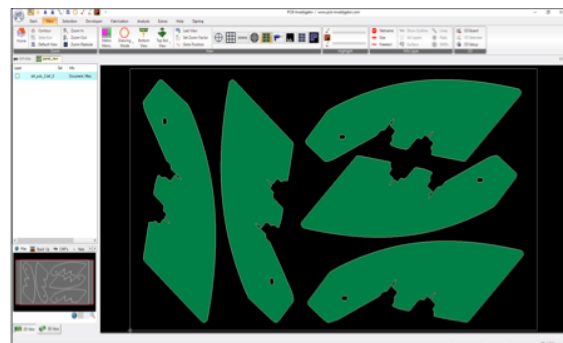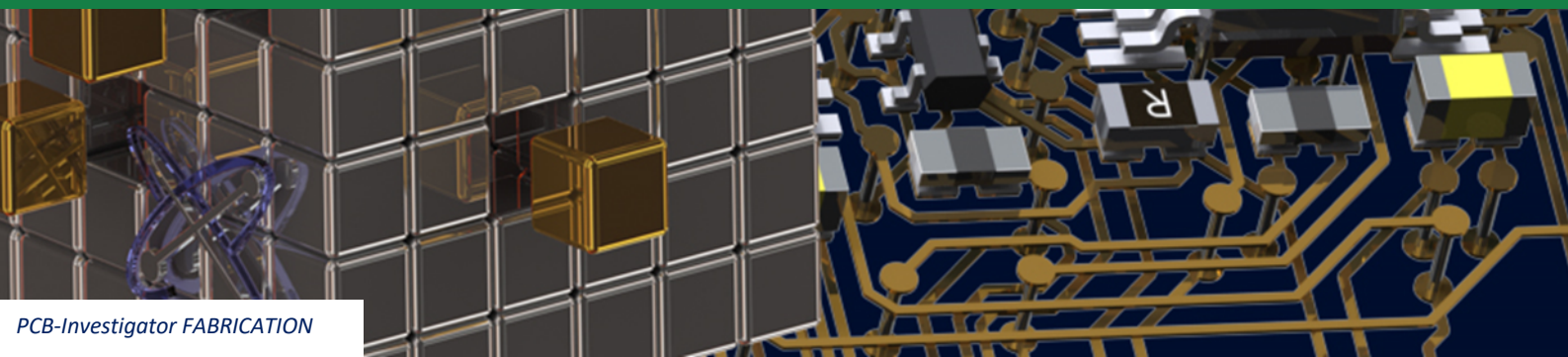
AOI Analysis

In the development of printed circuit boards, it is not a rare occurrence that deficiencies in the design are only noticed during the production process or, for example, during automatic optical inspection (AOI). However, you know that additional costs and workload could have been minimized in advance by making minor design changes. So, why not check in advance whether the components have been set correctly? Sometimes boards even have to be redesigned afterwards or individually checked for soldering defects by hand, since the AOI inspection camera could not see and check the correctness of individual pins due to other components placed too close together. This could all be a thing of the past now and forever. With our innovative 2D and 3D (Ray) AOI analysis included in the FABRICATION version, it is possible to identify any critical components in advance. Guarantee later testability and play it safe!

Automate your processes!

With our edition FABRICATION, you can complete the panel creation for your PCBs just before lunch. Whether you are mass producing a large number of PCBs for your customers or prototyping a handful of project boards in one go, panel creation is an effective way to increase production efficiency. In the early days of PCB design, you needed additional software, hours of tedious engineering planning and perhaps even feasibility meetings with the manufacturing teams to create your PCBs. Fortunately, we learned a lot from these early and cumbersome processes, so panel building is now a commonplace activity. Automate the process with our Panel Builder and our innovative Nesting Algorithm, which will always find the most space-saving and cost-effective solution for you - and all by itself. So you can save not only money, but also time. Opt for the next step, automation, and choose the FABRICATION edition! Panel creation made easy.

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The Plugin Panel Builder will also assist you with the arrangement of geometrically demanding layouts.

Data Exchange made easy!

A printed circuit board passes through many different phases from design to development and finally ends up in production, which is your area of responsibility. But how to deal with the problems you discover during your inspection, which can affect the producibility of the design? How to cooperate best with design departments? The Embedded feature, which has been integrated into FABRICATION, helps you get everyone involved to work with PCB-Investigator without having to buy additional licenses or perform time-consuming installations. Simply forward your PCB dataset by mail, the PCB-Investigator software is already included in the file. This gives you an easy way of making arrangements and drawing attention to design errors in good time. Optimizing the BOM is just one example of the benefits of this special PCBI feature!

If you choose the FABRICATION version of PCB-Investigator…

we will equip you with the perfect tool to be ideally prepared for the production of your PCB designs. Find out in time whether a design will possibly cause any problems in its production and what kind of difficulties this might be. With FABRICATION, you are able to initiate all the necessary adjustments before it can become expensive and unnecessary deadlines are missed. This version offers you a variety of plug-ins that are tailored to your needs in manufacturing. Do not lose sight of the most important aspects and produce products according to the highest quality standards. Our FABRICATION tool supports you in your everyday tasks and relieves you by automating processes.

The FABRICATION version contains among others the following functions:

- Panel Builder including Nesting algorithm
- Stencil Analysis
- Bare Board Analysis (DRC)
- Tombstone and Component Analysis
- Test point report
- Component editing functions
- Automation interface and script engine
- Additional import/export formats (e.g. GenCad, IDF, IPC2581)
- Design compare

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About PCB-Investigator

CAD/CAM –Software for Electronics

The best system available to investigate all information of Printed Circuit Boards!

PCB-Investigator can be delivered in six versions. Each is designed for a specific area of application and contains particular plugins to ideally meet the requirements of the respective field of application.

o   BASIC version including the main features for visualization and measurement
o   ULTIMATE version with access to all plugins for mostly single users
o   FABRICATION version to support your production process
o   PRODUCTION CONTROL version for the export of machine formats
o   ELECTRONIC DEVELOPER version to ensure the best possible functionality of your PCB
o   PHYSICS version for thermal management

To test PCB-Investigator in detail, simply download the full version and work with it for a full 30 days, free of charge and without any obligations.

With PCB-Investigator, anyone can find the right edition for their requirements. More information about the editions and demo version can be found at www.pcb-investigator.com.

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