# Full support from design to production maturity 

## PCB-Investigator DEVELOPER Version

$\rightarrow$ You are responsible for ensuring the functional safety of the PCB?
$\rightarrow$ You are looking for a software that enables you to filter all relevant electronic information?
$\rightarrow$ Being part of a team, cross-departmental work is part of your daily routine?

## Then...

the Edition DEVELOPER of PCB-Investigator is exactly the right choice for your particular needs. This version is mainly bought by electronic developers and circuit board designers. They appreciate the DEVELOPER as a major help in their daily work, not least because of its easy handling.

The DEVELOPER version focuses on the best features to see and work on electronic details to carry out a reliable design review. After all: Your task is to guarantee the functionality and reliability of the printed circuit board! A concept that may appear good at first glance, may nevertheless contain small errors in detail. And you know best how quickly this can lead to severe problems.
DEVELOPER will help you to bring your first design to production maturity!


## As an electronic developer...

you design and ensure the manufacturability and functionality of the products that will significantly influence the growth of your company. Only a efficient product can successfully generate sales. The fields of application for your PCB designs are virtually infinite, ranging from medical instruments to innovative 5 G products. Comprehensive background knowledge is therefore indispensable for you. Nevertheless, your task is repeatedly reduced to the cost/benefit factor. It is about better and faster designs (high-frequency PCBs), which - without tolerating any quality restrictions - should at the same time become ever cheaper. A challenging task, as at the same time you are under constant time pressure: Meeting deadlines is your daily business.

## Variety of Responsibilities

Edition DEVELOPER supports you in planning, developing, analyzing (design review) and commissioning electronic circuits, under consideration of customer requirements and the alignment of schematic developments with specifications. You will be able to carry out error analyses in timely manner and, on this basis, develop solutions. As a supervisor of the design process and a provider of design functionality, you will be able to easily communicate with other departments to discuss changes and jointly design the best possible product. It's all about implementing the necessary measures to maximize quality and reduce costs, not forgetting the functional safety of the electronic products you should be guaranteeing. After all, you are in charge of the development, improvement and maintenance of product-related electronic and electrical systems and simultaneously you are the interface to the mechanics and software in series development. That' s quite a lot of responsibilities that determine your everyday work - but step by step...

Ensure signal integrity and solve EMC problems in the development phase!

PCB Investigator DEVELOPER supports you in ensuring the signal integrity of your PCB design. With high-frequency PCBs, the parasitic effects of copper on the PCB can no longer be neglected when determining the signal quality. We therefore offer specific plugins that allow you to perform a signal integrity analysis with only a few mouse clicks. All relevant electrical information is filtered out and processed in plugins such as Net Length, Capacity Calculator and Impedance Calculator so that you stay on the safe side during your layout review. Signal runtimes can quickly be checked and the capacity and impedance calculated with little effort. Use DEVELOPER to ensure the functional safety of your design!

EMC or electromagnetic compatibility is not necessarily a topic you want to deal with willingly. Rather, it is considered a mandatory evil, because usually your end product must meet an EMC standard after the design process is finalized in order to be serially produced.

## Guarantee the manufacturability of your PCB design!

Customers and manufacturers should not experience any unpleasant surprises when using your products for the first time, as the specified limit values weren't complied. Hence, it is the goal to achieve a stable and trouble-free operation. DEVELOPER helps you to tackle this problem even in the development phase, so that no subsequent, cost-intensive modifications are necessary. After all, guaranteeing functional safety is particularly important in times of ever higher frequency rates and more compact structures. Detecting sources of malfunctions afterwards and to then calm things down means additional work and delays. The management department does not appreciate such difficulties, as you know best! Benefit from our plugins for analyses at net level to check the electromagnetic compatibility.


In EMC and hazard analysis, PCB Investigator supports you with automatic length and distance calculations as well as text-based and graphical visualization of analysis results. Unnecessary interference in the end product can thus be easily prevented. At the same time, we know that the collaboration with other departments such as the layout designers is indispensable.

Easily work across departments keyword digital transformation

For example, DEVELOPER offers the possibility of change tracking, particularly helpful in communication with the circuit board designer. Two different plugins for comparison (text-based and graphical) help you to cooperate transparently and without any complications. Departments frequently work in separated locations, agreements on changes are often made via e-mail - an unnecessarily time-consuming process, particularly when it is sometimes only a matter of minor details. But change tracking is a key element in the development process between circuit board designer and PCB developer. Design changes are visualized in an overview, so that you can easily decide whether new analyses are necessary and which detail you want to look at more closely, as you consider it to be critical. Using our compare functionality, however, you will not miss even the smallest shifts in the layout in future. An error-free documentation with the Design Report plugin and the embedded function prevents expensive misunderstandings. The Design Report generates an overview of all relevant parameters of the PCB. This function is especially helpful when working together with other people involved in the development and manufacturing process. Workflows are facilitated and constant queries become obsolete. PCBInvestigator Embedded, also integrated in the DEVELOPER Edition, enables everyone involved to work with PCB-Investigator without having to buy additional licenses or perform time-consuming installations. Bring
every person involved in the design process up to speed and avoid unnecessary misunderstandings! With PCB-Investigator you don't need any printouts, just a few mouse clicks to keep everyone updated - according to the concept of Digital Transformation.

## As a circuit board designer...

you know that the days when the printed circuit board layout was simply considered as the constructive realization of the electronics schematic in a carrier for electrical connections and components are over. Designing layouts has become an increasingly complex area consisting of many different tasks. You create standard and guideline compliant PCB layouts in close cooperation with the fields of work like circuit development, standardization, quality, manufacturing and accompany the PCB from the first draft to series production. During new developments, you give the PCBs a new face and implement the circuit schematics specified by the developer. You conscientiously incorporate adaptions as part of change management or create PCB documentations, since you know that even the smallest changes may have an impact. Luckily, DEVELOPER's various plug-ins make it much easier to track changes, so that crossdepartmental work can be carried out without additional effort. You are also involved in production testing and keeping the component library, including the design rules, up to date.

## The expert is you!

The layout plays a decisive role in the actual function and performance of the electronic circuit. In addition, the design of the PCB layout has a substantial influence on the manufacturing costs of the PCB as well as the expenses and yield of electronics manufacturing. The strict consideration of the aforementioned countless

specifications demand the use of experts for the design of PCB layouts. Once you have received approval for production, there is no turning back. But are you sure you have checked all the design rules you were given?

## Play it safe!

Check your PCB design for its manufacturability with the innovative Design Rule Check (DRC) of PCB-Investigator! A perfectly thought-out PCB layout not only reduces the failure rate (ppm), but also lowers production costs! In addition, the time to reach series production (time-to-market) can be accelerated by fewer queries from the PCB manufacturer! Predefined test rules can easily be supplemented with your own rules when using the new Rule File Manager. Rule sets can be created according to company standards or supplier requirements. Within a few seconds the complete design can be checked for producibility. We will help you make sure that you have not left out or forgotten any details. Automate your daily work with DEVELOPER!

## PCBI-365 - Keep one step ahead!

Did you know that we recently added the option of cloud integration to our product range? Data maintenance or the digitalization of data is the prerequisite for a step-by-step automation of processes and as a layout designer it' $s$ your daily business. Let us make your daily work easier, as you do not have to deal with the constant maintenance of libraries anymore. With PCBInvestigator Cloud 365 you always have access to a central management platform. Not only does it give you access to part libraries, but it also gives your entire team quick access to all the data they need, including projects, designs, customers, scripts, libraries, etc. Rely on PCBI-365 and digital transformation!

## If you choose the DEVELOPER version of PCB-Investigator...

you will get access to the best features and plugins to work on all electronic details of the PCB. As an electronic developer or circuit board designer, we can help you to filter and work out all relevant information to ensure the functionality of your PCB design. Since we know that it is part of your daily work routine to communicate with other departments and to permanently make arrangements, we will support you in this respect as well. The DEVELOPER Edition assists you in change management and in analyzing modifications. So, you always have an eye on the producibility of your PCB - no more details escape your attention, with ease!

PCB-Investigator DEVELOPER includes among others the following functions:

- Net Group Manager
- Net length, Capacity \& Impedance Calculator
- Automation Interface and Script Engine
- Additional Import/Export formats (e.g. GenCad, IDF, IPC2581)
- Bare Board Analysis (DRC)
- Creepage Analysis
- Hazard Analysis
- Connector Analysis
- Test Point Report
- Design Compare

Schindler \& Schill GmbH
Im Gewerbepark D33
93059 Regensburg
Germany
Tel: +4994156813620
Fax: +49 94156813621
info@easylogix.de
Trade registry of Regensburg,
HRB 11047
USt. Nr. DE260625872

## 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.

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

