Precision and Throughput Increased
LPKF CircuitPro PL CAM Software

LPKF
Laser & Electronics
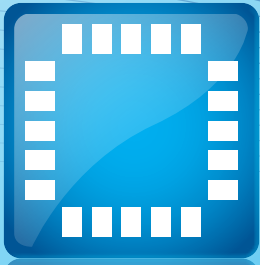
CircuitPro

Experience Guides the Way

LPKF is one of the pioneers in micro-material processing with the laser. LPKF processes set the standard, for performance as well as quality, in various areas of medical technology, electronics and the automotive industry. The many years of experience in system development and applications with customers are reflected in the CircuitPro software – now also in a specific version for the LPKF ProtoLaser.

Continuous Precision

The capability of a laser structuring system stands and falls with the software that controls it. With this in mind, in 2012 LPKF initiated a complete reworking of the system software for all of its product lines. The software development program was completely redesigned in its personnel, method and strategy. A common core software is supplemented by product-specific modules.

With the introduction of LPKF CircuitPro PL, the LPKF ProtoLaser S and ProtoLaser U/U3 also profit from these development efforts. Optimized routines substantially shorten calculation of the machine data from the CAD layouts.

Familiar Operation

The LPKF CircuitPro PL software offers easy and intuitive operation. Users of the LPKF ProtoMat systems have a familiar user interface but also new specialized functions for laser processing.

New software algorithms generate optimal laser paths in order to transfer even demanding layouts to the substrates in a geometrically accurate fashion.

Activation of the laser systems is done via a standard PC and the USB interface.

- Intuitive operation
- Quicker calculation of machine data
- „Special areas" for greater precision
- Uniform LPKF core software
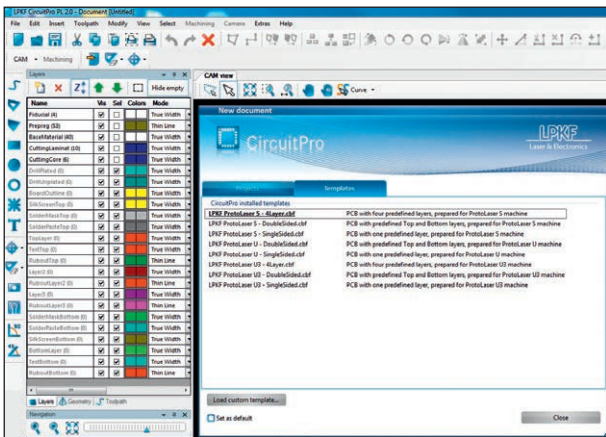
## Faster Results with the Computer and Laser System

The system programmers at LPKF have done a good job. With the development of the LPKF CircuitPro software, all hitherto existing procedures from the previous program were also looked at: the result is uniform, intuitive operation over all software variants, extensive automation of routine tasks and optimization of calculation processes. And, what's more, some calculations now run up to ten times faster on the same computers. And there are also benefits for the practical processing time. Due to improved path routines, some position changes and cutting processes have been simply omitted.

Special Areas

CircuitPro PL has taken a large development step through the introduction of special areas. The software identifies areas with fine structures and removes the copper layers between the conductor traces by means of a process that runs parallel to these structures. Compared to the previous version, the danger of local substrate damage and the duration of the rub-out process are reduced. At the same time, particularly fine structures are treated with care.
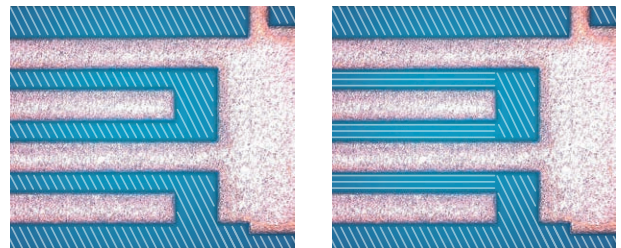
Left: the previous version; right: processing as a special area. Processing parallel to the conductor tracks geometries treats fine structures with care and increases precision.
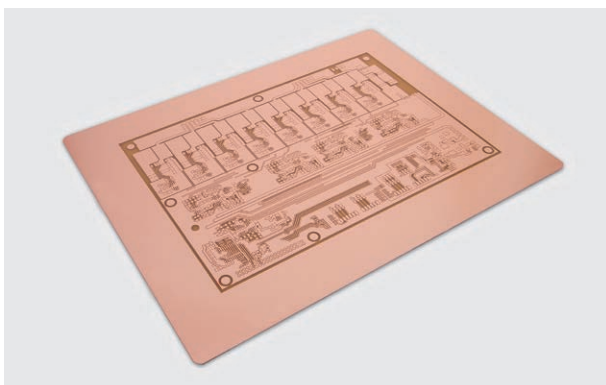
More layout data are seamlessly and in a design-dependent fashion optimized and connected

Island Hopping

By means of stitching – seamless connection of scan fields – the laser systems can also structure large circuit boards. Until now stitching was limited to square fields. The new CircuitPro PL software chooses the limits so that they run on existing structural elements. Separate stitching cuts are thus reduced and precision increased over the entire board.

A Faster Way to the Final Product

The task of modern CAM software? It should implement the layout ideas of the developer as simply as possible in control data. Development of uniform machine software at LPKF targeted two aspects in particular: uniform, easy operation and at the same time a high capacity in taking over even demanding layouts. The results are process and material libraries that reproduce the knowledge of physicists, technicians and engineers at LPKF including innumerable application tests.

The second important aspect concerns machine control. How can the user get to his/her results in an especially economical, precise and quick manner? For this, LPKF is creating special modules for the individual system lines and is taking into account the individual capabilities of the activated systems – all the way to optional supplements.

The result is software that communicates well with layout programs and also helps the less-experienced user to quickly experience success. And the application specialist also has access to rarely required machine parameters.

System Requirements

Minimum requirements:
- Dual-Core CPU with at least 2.6 GHz
- 4 GB RAM
- 5 GB free disk space
- Dedicated graphics card with at least 512 MB non-shared memory; at least 1 024 x 768 px
- 2 x USB 2.0

Recommended requirements:
- Quad Dual Core with at least 2.9 GHz
- 12 GB RAM
- 6 GB free disk space
- Dedicated graphics card with at least 1 GB DDR3 non-shared memory; at least 1 680 x 1 050 px
- 2 x USB 2.0
- Windows XP SP3 (32 bit), Windows Vista SP 1 (32/64 bit), Windows 7 (32/64 bit)

Worldwide (LPKF Headquarters)

LPKF Laser & Electronics AG   Osteriede 7   30827 Garbsen   Germany

Phone +49 (5131) 7095-0   info@lpkf.com   www.lpkf.com

North / Central America

LPKF Laser & Electronics North America

Phone +1 (503) 454-4200   sales@lpkfusa.com   www.lpkfusa.com

China

LPKF Tianjin Co., Ltd.

Phone +86 (22) 2378-5318   sales@lpkf.cn   www.lpkf.cn

Hong Kong

LPKF Laser & Electronics (Hong Kong) Ltd.

Phone +852-2545-4005   hongkong@lpkf.com   www.lpkf.com

Japan

LPKF Laser & Electronics K.K. Japan

Phone +81 (0) 45 650 1622   info.japan@lpkf.com   www.lpkf.jp

South Korea

LPKF Laser & Electronics Korea Ltd.

Phone +82 (31) 689 3660   info.korea@lpkf.com   www.lpkf.com

LPKF Laser & Electronics AG sells and markets products and provides support in more than 50 countries. Find your local representative at www.lpkf.com.

Made in Germany