

# ISOCAM3000

# ISOCAM3000'S MAIN FUNCTIONS

The functions of IsoCAM3000 software that represent its goals

AA60320,54240,-145  
AA60320,54241,-157.54  
PA59944,54038;  
PA58720,54038;  
AA58720,54241,-45.0003;  
PA58426,54247;  
AA58570,54391,-45.0003;  
PA58367,57641;  
AA58570,57641,-44.8004  
PA58677,58034;  
AA58820,57891,-45.0003;



## INTERFACE FUNCTION

Serving as an interface between the CAD systems and the CNC systems.  
(Through calculations to transform the PCB design into CNC machines' instructions for PCB manufacturing).



## INSPECTION FUNCTION

Identifying the design rules violations, highlighting them on screen and providing an option for forcing special isolation to minimize the effect of the problems.



## MODIFICATION FUNCTION

Editing, manipulating and modifying the objects from the CAD system files  
(Applying small changes, cloning, moving and panelization of the objects).

# ISOCAM3000'S KEY FEATURES

The most important features of IsoCAM3000 software and why we are proud of their quality

01

## IMPORT OF CAD SYSTEMS' FILES

IsoCAM3000 can import Gerber files; HPGL files; Bitmap files; G-Code files; DXF files; other files. IsoCAM3000 supports profiles of the different PCB design CAD systems to automate the Gerber, drill and Excellon import process in terms of automatic recognition of layers. For the drill files the format is auto recognized, too.

02

## ISOLATION & RUBOUT

The quality of the calculations is the highest possible with software resolution of 1 nanometer. We use advanced and sophisticated algorithms for toolpath's calculation and for utilization of the multi-thread possibilities of the modern processors. Numerous comfortable options available in the process.

03

## DESIGN RULES VIOLATION & FORCED ISOLATION OPTIONS

Design rules violation (DVR) option starts automatically after isolation and discovers the problematic areas, where the PCB design is disturbed). Then the Forced isolation option allows you to insulate this area with minimum DRV in the best possible way.

04

## OBJECTS MANIPULATION

Easily clone / move / rotate / delete / panelize / group / ungroup objects with possibility to Undo and Redo – 32 levels.

05

## BREAKOUT TABS, REMOVE SPIKES AND OTHER EDITING THE FINAL LAYOUT FEATURES

Possibility to import additional objects – breakout tabs, texts, vector texts, pictures, bitmaps, QR codes, Datamatrix, different fiducial marks, etc. Remove spikes is an option to remove some areas with remaining copper in order to avoid spikes (can save time, as it completes the isolation if rubout will not be executed).





















06

## EXPORT OF FILES TO CNC PROGRAMS

IsoCAM3000 can export files in the following formats: G-Code, HPGL, Gerber & Excellon. It can print projects. It can export projects with scale factor (for Gerber, Excellon and printing)..


# ISOCAM3000'S COMPLETE LIST OF FEATURES – PART 1

Exhaustive list of IsoCAM3000's features

- |  |   |   |   |
|--|---|---|---|
| <br><b>GERBER IMPORT</b><br>Import and processing of Gerber Files.<br>Remark: 274-D / 274-X                               | <br><b>HPGL IMPORT</b><br>Import and processing of files with HPGL format.                                 | <br><b>BITMAP IMPORT</b><br>Import and processing of Bitmap files.  | <br><b>DXF IMPORT</b><br>Import and processing of DXF format files..   |
| <br><b>PROJECT FILES</b><br>All the necessary information concerning one project, saved in a compressed format.           | <br><b>UNDO / REDO</b><br>The size of UNDO/REDO buffer is 32 commands deep.                                | <br><b>SCALING</b><br>Scaling is available upon import of a Bitmap file and upon export.                                | <br><b>MULTI-THREAD</b><br>Calculations are optimized for multithread execution. As a result – up to 8 times faster. |
| <br><b>MULTIPLE UNITS</b><br>Inch, mm, and all HPGL/Excellon units supported by RoutePro3000 software.                    | <br><b>MULTIPLE LAYERS</b><br>Possibility to work with multiple layers – up to 16.                         | <br><b>PECK (STEP) MODE</b><br>Preparation of processing on passes for all tools and for all operations.                | <br><b>AUTO SYNCHRONIZE LAYERS</b><br>Auto synchronization is done always and automatically.                         |
| <br><b>MIRROR FUNCTIONS</b><br>Mirror (on X, Y or both) during the import and always automatic mirroring of bottom layer. | <br><b>ZOOM FUNCTIONS</b><br>Possibilities for zooming up to 20000% (200x).                                | <br><b>OBJECT MANIPULATIONS</b><br>Copy / Delete/ Select/ Deselect/ Move/ Rotate/ Group/ Ungroup of objects and groups. | <br><b>UNLIMITED OBJECTS NUMBER</b><br>Practically unlimited objects number (up to 8096).                            |
| <br><b>ISOLATION</b><br>Generation of milling data with up to 8 tools for isolation and up to 8 tools for rubout.         | <br><b>DESIGN RULES CHECKER</b><br>Detecting of design rules violation (DRV) in a fast and correct manner. | <br><b>FORCED ISOLATION</b><br>Forced isolation for the problematic areas detected by DRV using advanced algorithm.     | <br><b>MILLING ENTRY POINT</b><br>Possibility to select the milling entry point for the mechanical contours.         |

# ISOCAM3000'S COMPLETE LIST OF FEATURES – PART 2

Exhaustive list of IsoCAM3000's features

- |  |  |   |   |
|--|--|---|---|
|  <b>MILLING DIRECTION</b><br>Possibility to select milling direction – conventional or climb.                                   |  <b>SPIKES REMOVAL</b><br>Remove residual copper that remains as spikes (isolation Problem Detector).                           |  <b>RUBOUT</b><br>Assign/Import unlimited number of rubout regions. Rubout with up to 16 tools.   |  <b>BREAKOUT TABS</b><br>Insertion of small interruptions of the cutout contour that allow the ready board to remain firmly attached.  |
|  <b>REGISTRATION PINS</b><br>Adding or removing registration pins (fixing holes).   |  <b>STENCIL CUTOUT</b><br>Import of Gerber files for stencil and set-up the necessary tool for it.                              |  <b>PRINT FUNCTION</b><br>Possibility to print the project to file or paper.  |  <b>CONTOUR SELECTION</b><br>Auto select inner / outer tool diameter compensation for all cutting operations. Can be changed manually. |
|  <b>PANELIZATION</b><br>Placing multiple smaller objects on a large work piece (panel) in order to be machined together.        |  <b>VISUALIZATION MODES</b><br>Copper view, showing the result of the machining. Other views, depending on the layers' order... |  <b>PICK &amp; PLACE HELPER</b><br>Assists you during manual soldering when you populate your prototypes by showing components on screen. |  <b>INSERT HOLES &amp; PADS</b><br>Insertion of holes or through-hole pads in your project.  |
|  <b>INSERT TEXT/PICTURE</b><br>Generation of negative, positive or engraving contours with text or image that must be inserted. |  <b>INSERT VECTOR TEXT</b><br>Insert vector text to be engraved with one pass. Suitable for small letters.                      |  <b>INSERT QR CODE</b><br>A lot of options are available depending on the methodology of manufacturing and the pitch size.                |  <b>INSERT DATAMATRIX</b><br>Insertion of datamatrix is handled in the same way and with the same options as the insertion of QR code. |
|  <b>PRINTER DRIVER</b><br>The function allows import of bitmap data for engraving from any windows application.                 |  <b>GERBER EXPORT</b><br>Export of projects in Gerber and Excellon format files.  |  <b>HPGL EXPORT</b><br>Export of machining programs in HPGL format files.   |  <b>G-CODE EXPORT</b><br>Export of machining programs in G-Code format files.  |

# ISOCAM3000'S DEPENDABLE CHARACTERISTICS

How IsoCAM3000 handles the listed features

## VERY RICH FUNCTIONALITY

IsoCAM3000 covers all CAM functions with impressive speed and accuracy (1 nm resolution)., It complies with the popular standards in the PCB industry. It is protected and digitally signed.



## EFFICIENT

Despite of the highest accuracy and precision of the generated toolpaths, the speed of work is impressive even for complicated projects. The graphics' performance is extremely high.



## MAINTAINABLE

IsoCAM3000 never crashes. The installation of the updates is easy and secure. It will continue to evolve and incorporate new features and functionalities. Any reported problems are immediately processed..



## HIGHLY RELIABLE AND WELL TESTED

IsoCAM3000 is carefully tested with more than thousand of projects from different CAD systems and with different PCB designs. The software is fault-tolerant to the possible maximum.



## EXTREMELY USABLE

IsoCAM3000 is user-friendly: understandable and learnable. Convenient and content-dependent mouse right-click options. It's very adaptable to the user – you can change all default colors as own profiles.



## PORTABLE

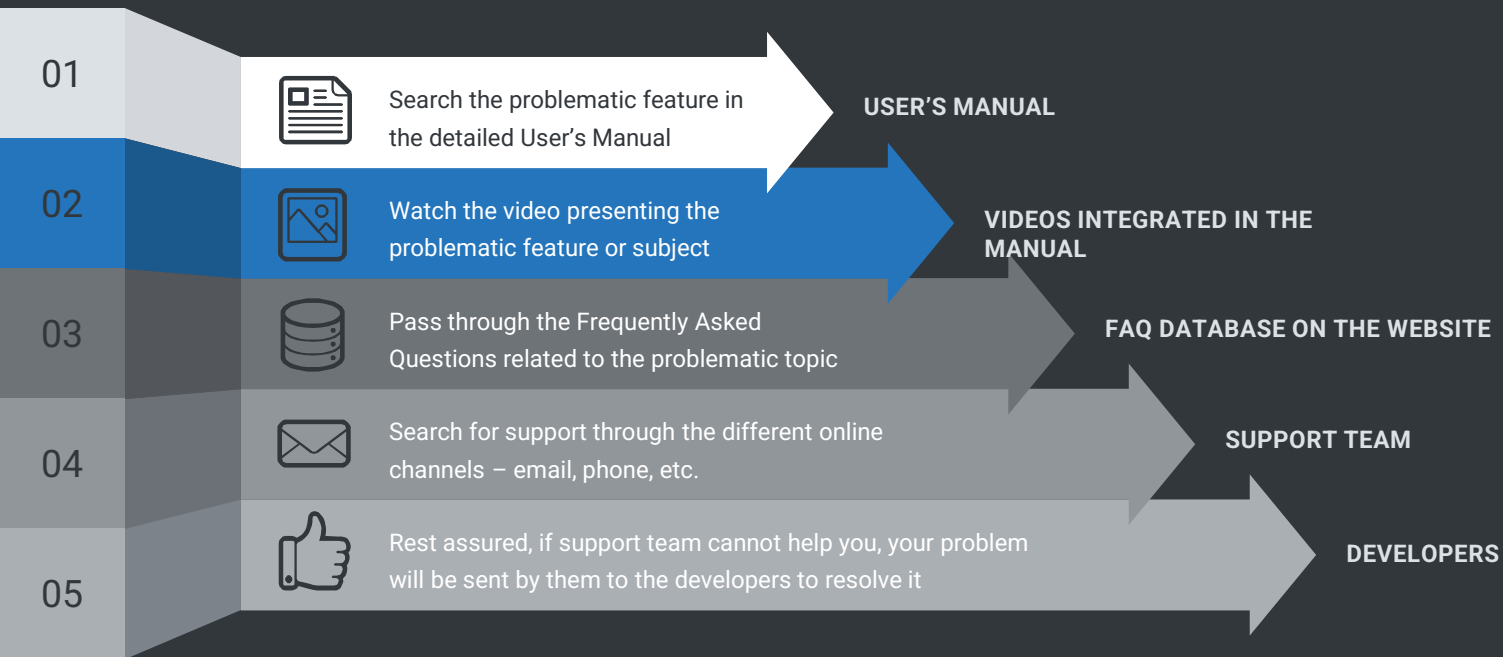
IsoCAM3000 works with almost any computer, using any Windows versions. It does not require any additional license files or keys. To work with it is only necessary to connect the dongle to the PC.



Characteristics  
of ISOCAM3000

# ISOCAM3000'S GREAT TECHNICAL SUPPORT

Multiple channels and methods to receive assistance when having a problem



# ISOCAM3000'S SECURE PURCHASE PROCESS

The process steps that we recommend for successful purchase

## DEMO VERSION REQUEST



Request and download the IsoCAM3000's DEMO version and the IsoCAM3000's User Manual. When you install the software and launch it, select your machine's model (in order to automatically adjust the working area).

## ISOCAM3000 EVALUATION



To easily explore all the functionalities of IsoCAM3000, we've included demo files of all types (project, Gerber, G-code, Bitmap, etc.) that you can freely use together with your own. All the functionalities in the software will work, except for the export function.

## ISOCAM3000 ORDER



If you are satisfied with the demo version, you can proceed with the ordering step. It is important for you to know that IsoCAM software comes and can be used only with a dongle.

## ISOCAM3000 DELIVERY



The final step for the purchase of IsoCAM3000 software is its dongle delivery. All that is left for you is to install ISOCAM3000 software and to connect and activate the dongle.

01

02

03

04



# ISOCAM3000'S TRANSPARENT DEMO VERSION

Request IsoCAM3000's DEMO Version Now !



**BUNGARD ELEKTRONIK GMBH & CO.KG**

Your trusted supplier



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