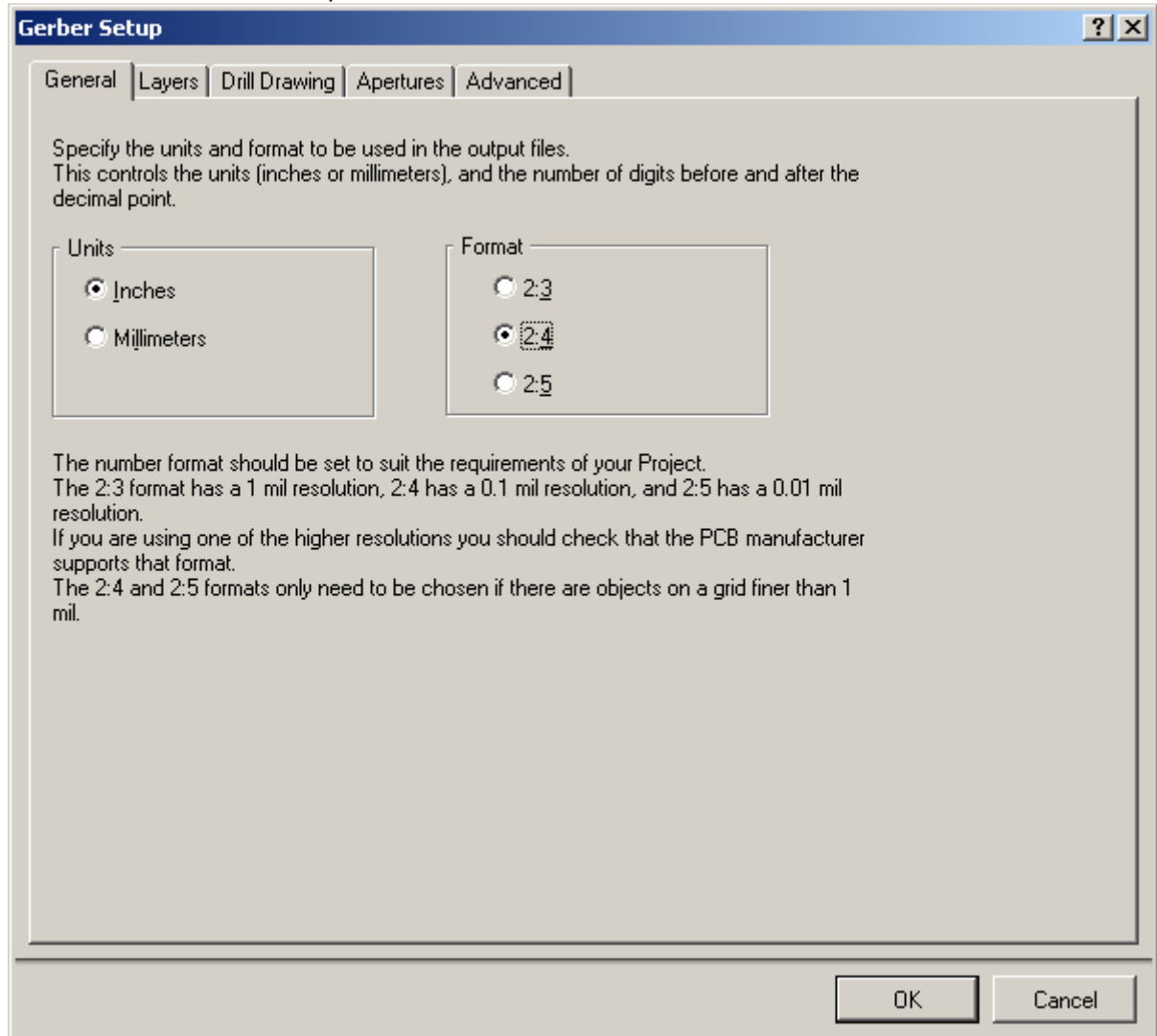


1. Datenexport mit Altium Designer

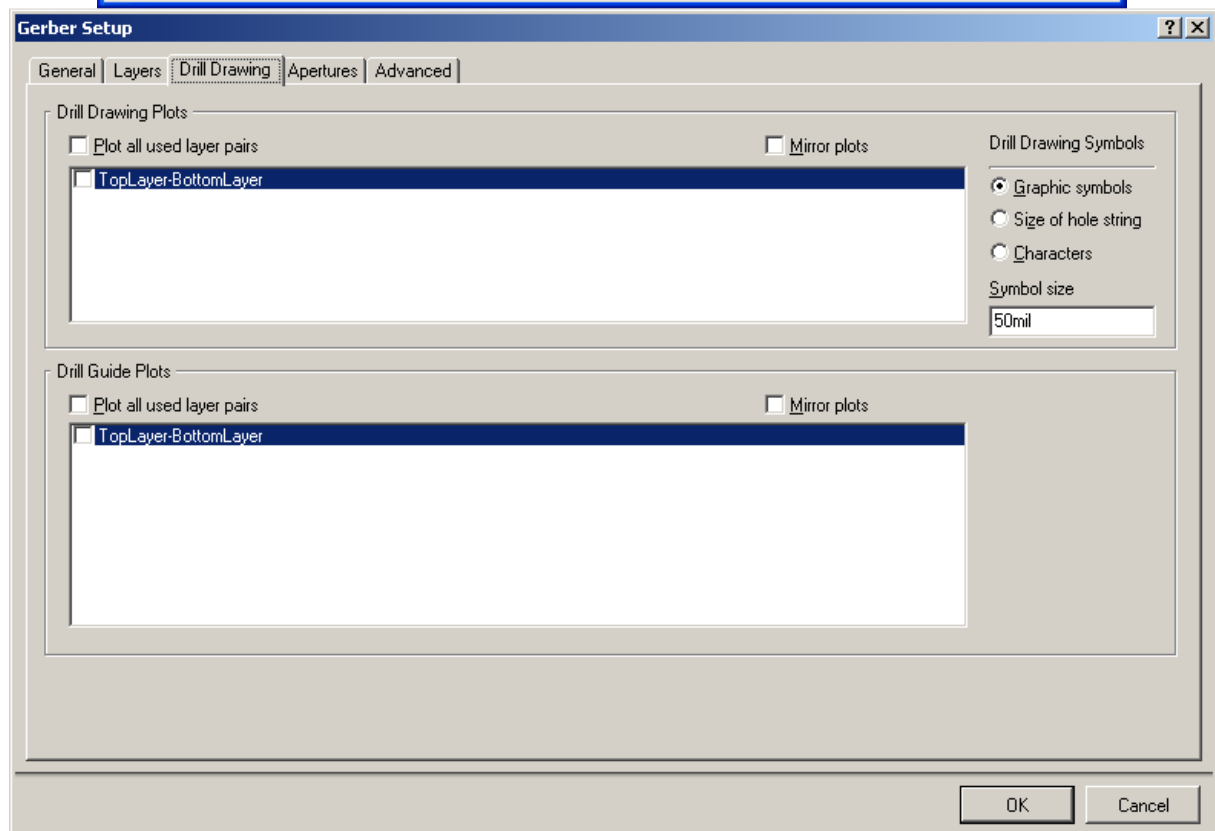
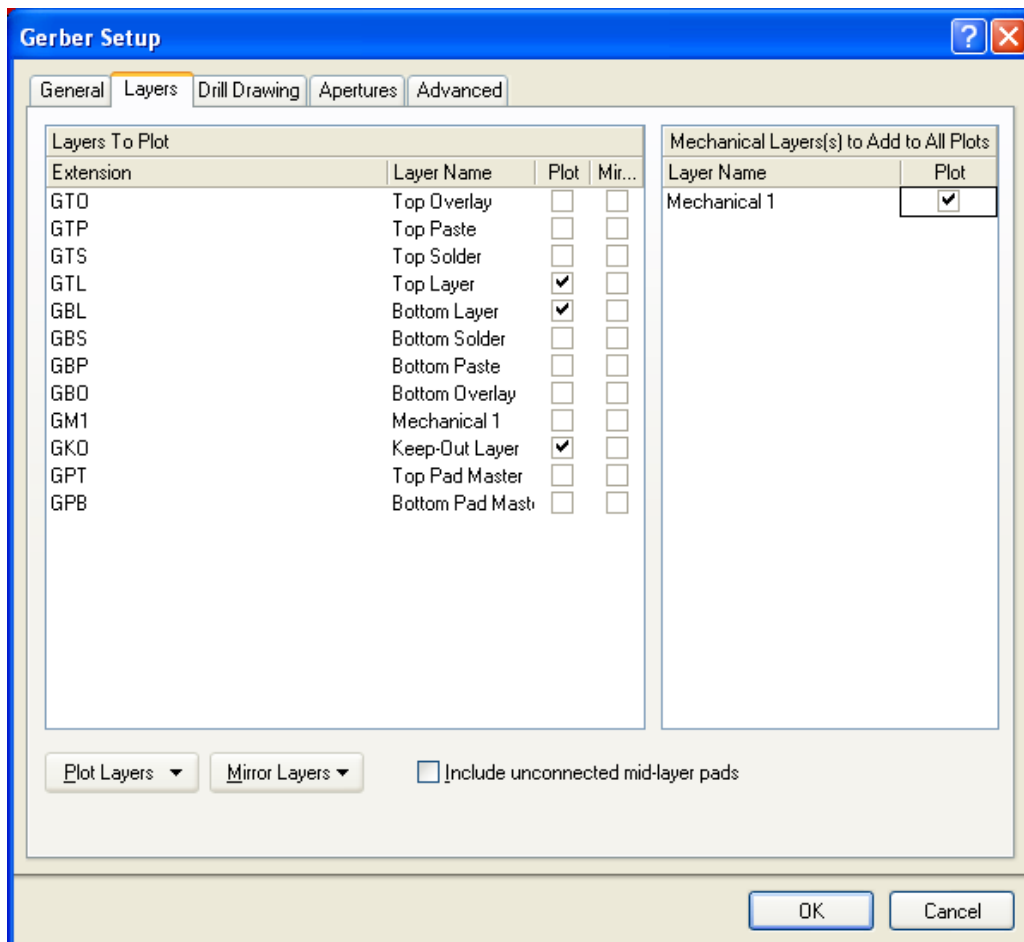
1.1. Altium Designer – Gerber Daten

- Layout (*.PcbDoc Datei) laden
- File -> Fabrication Outputs -> Gerber Files

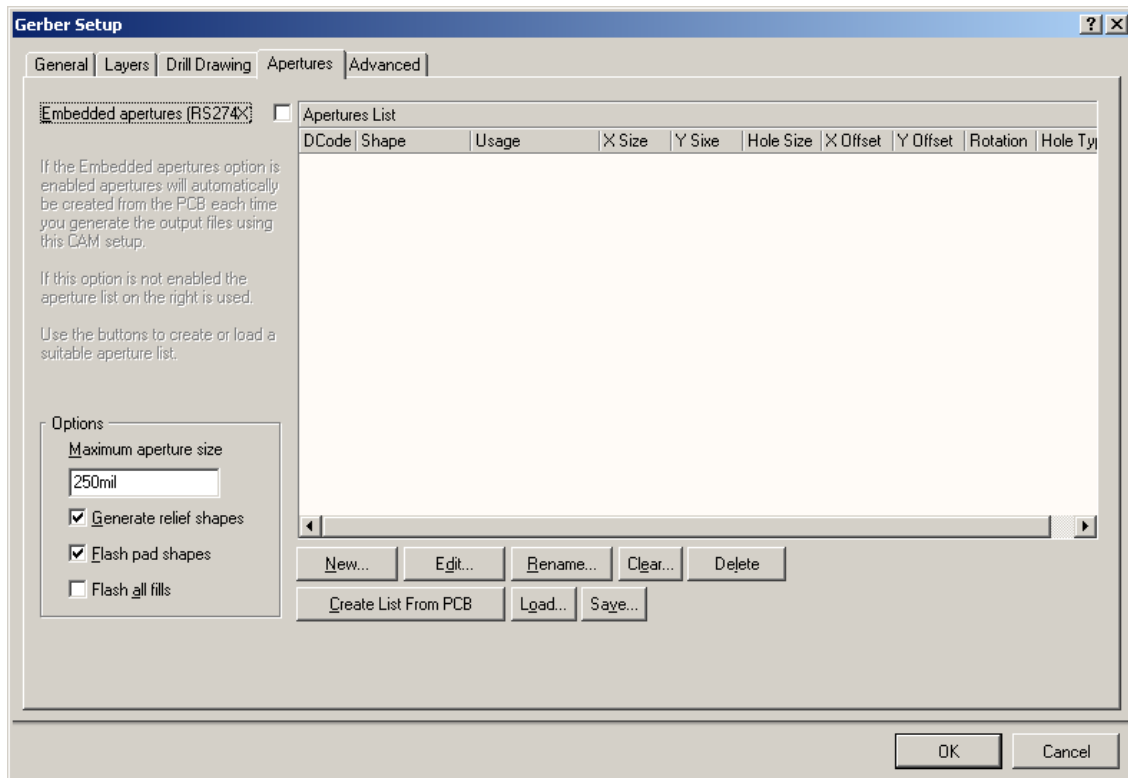


- Es wird 2:4 Auflösung verwendet. Die Koordinatenangaben in den Gerber-Dateien haben daher immer 6 Stellen, z.B: X011348Y012716D02*

Datenaufbereitung für die LPKF-Fräse

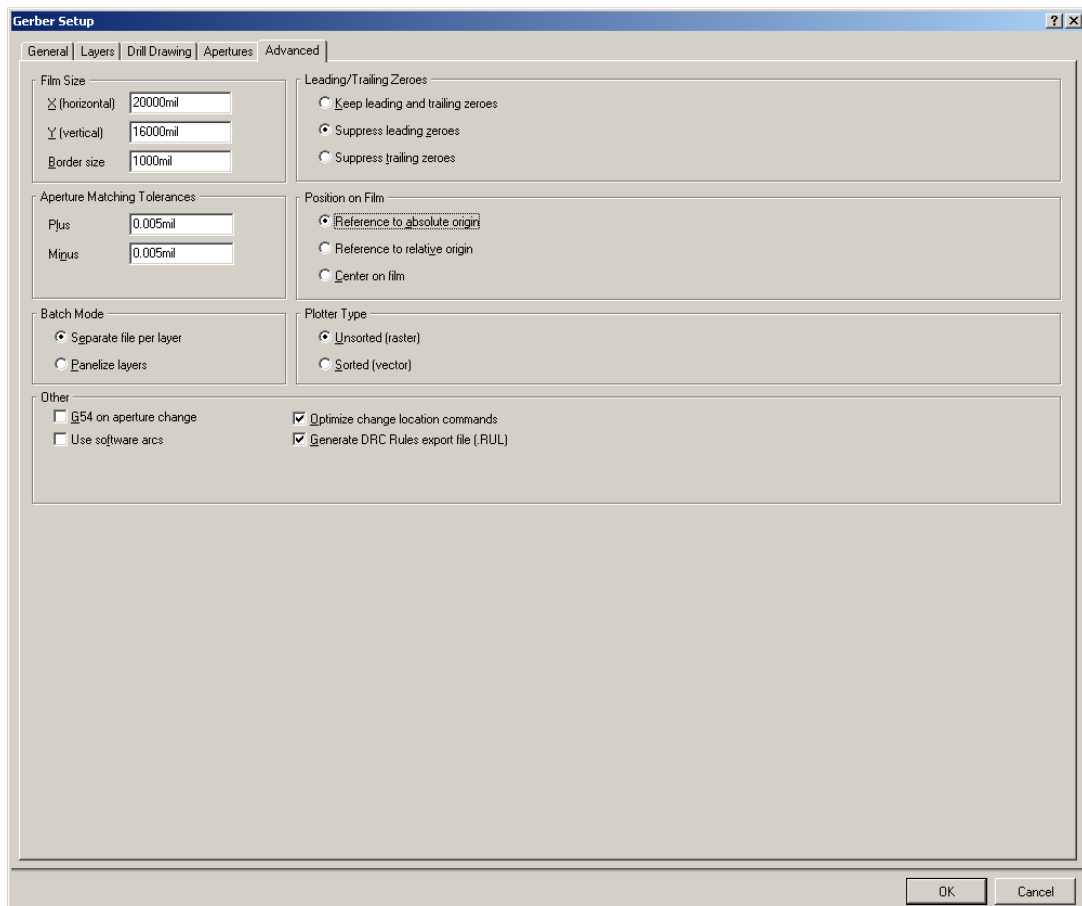


Datenaufbereitung für die LPKF-Fräse



Im Gegensatz zum Datenexport für den Leiterplattenfertiger benötigen wir hier eine separate Blendenliste (kein „Embedded apertures“)

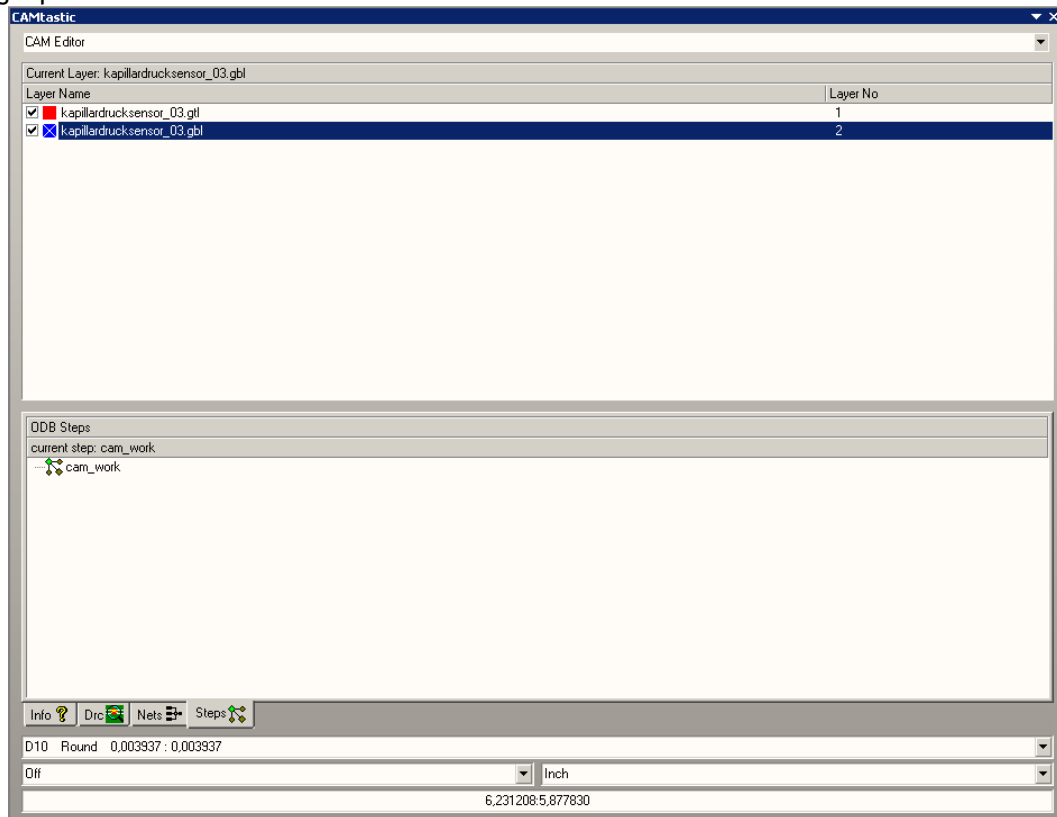
- **Create List from PCB**



- Position on Film -> Reference to absolute origin??

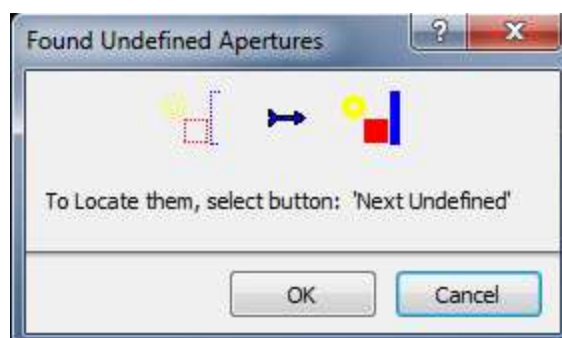
Datenaufbereitung für die LPKF-Fräse

Es wird automatic CAMtastic geladen. Die Camtastic-Datei wird für die weitere Datenaufbereitung nicht benötigt. Als Vergleich zur CircuitCAM-Ausgabe sollte die Datei aber gespeichert werden.

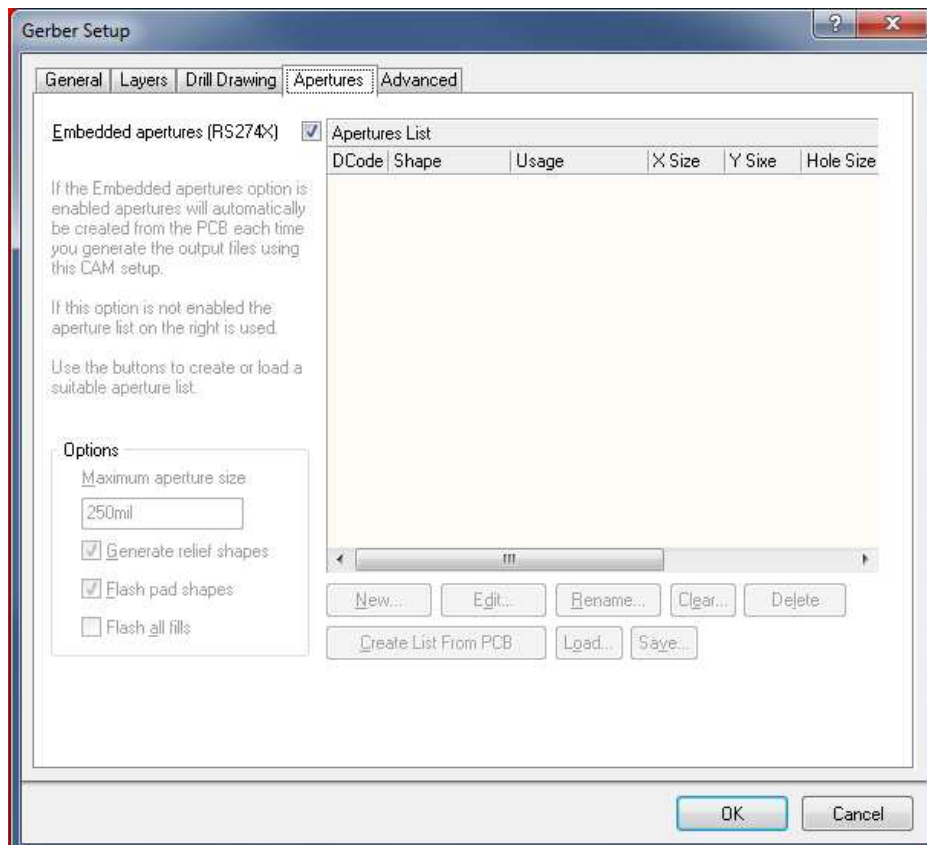


Achtung:

Wenn folgender Fehler bei der Generierung der Gerber-Files auftritt, muss im Gerber Setup die Funktion "Embedded Apertures(RS-274-x)" aktiviert werden und die Files müssen neu erzeugt werden.

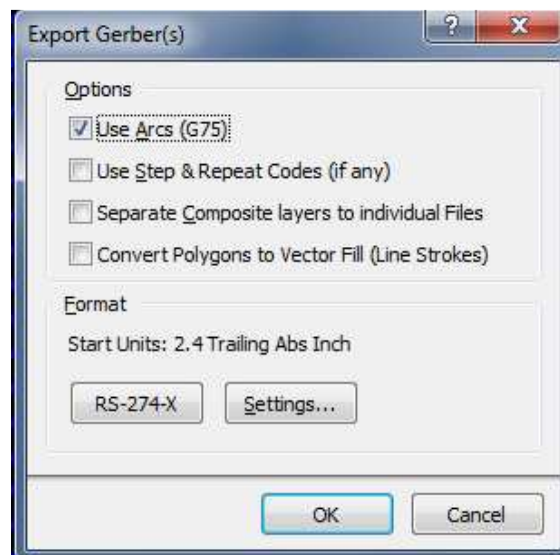


Datenaufbereitung für die LPKF-Fräse

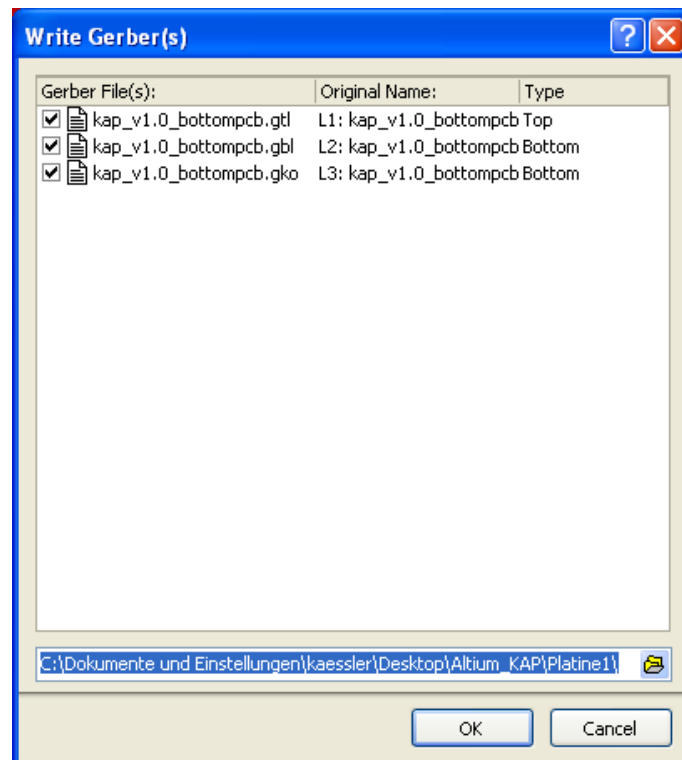


Export der Gerberdaten:

- File → Export → Gerber...



Datenaufbereitung für die LPKF-Fräse

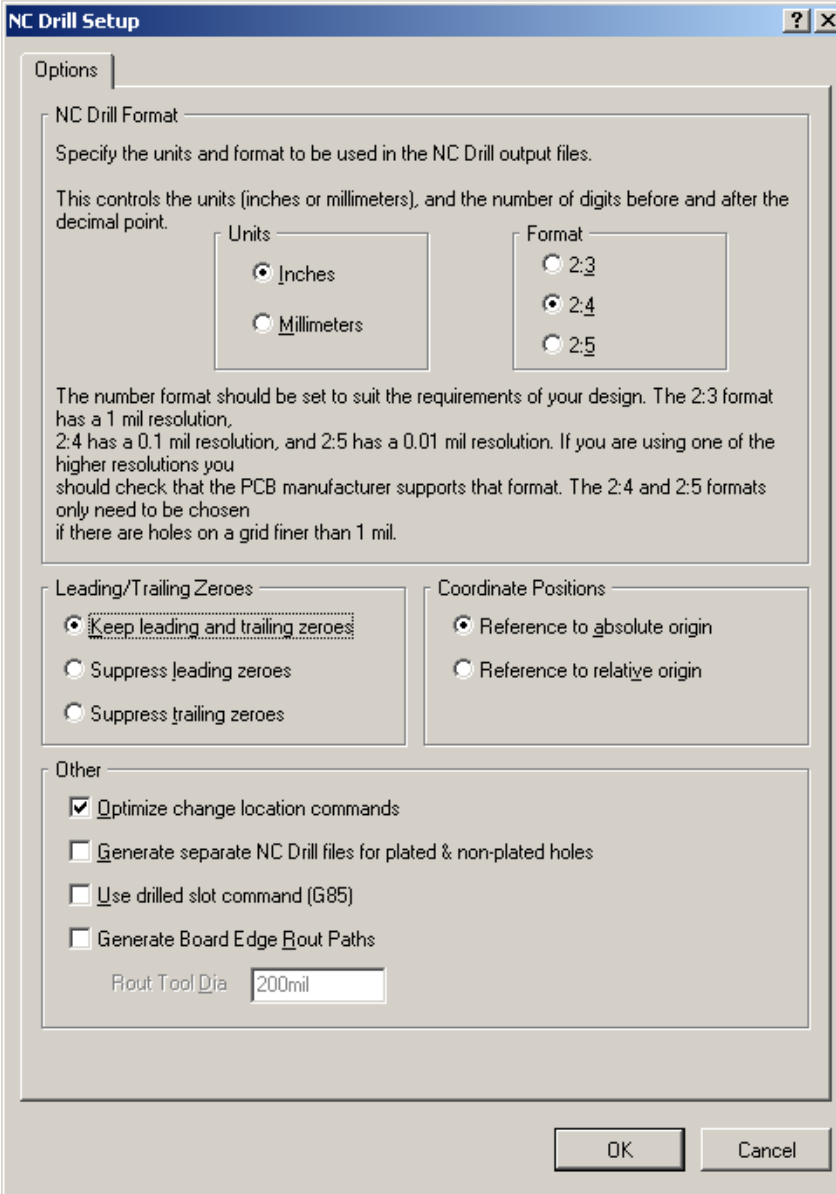


Folgende Gerberdatei werden erstellt:

- .gtl (Top-Layer)
- .gbl (Bottom-Layer)
- .gko (KeepOut-Layer)

1.2. Altium Designer – Bohrdaten

- Layout (*.PcbDoc Datei) laden
- File -> Fabrication Outputs -> NC Drill Files



The image shows the 'NC Drill Setup' dialog box in Altium Designer. It has a title bar with a question mark and a close button. The dialog is divided into several sections: 'Options' (selected), 'NC Drill Format', 'Leading/Trailing Zeros', 'Coordinate Positions', and 'Other'. The 'NC Drill Format' section explains that it controls units and decimal digits, with radio buttons for 'Inches' and 'Millimeters', and 'Format' options of '2:3', '2:4', and '2:5'. The 'Leading/Trailing Zeros' section has radio buttons for 'Keep leading and trailing zeroes', 'Suppress leading zeroes', and 'Suppress trailing zeroes'. The 'Coordinate Positions' section has radio buttons for 'Reference to absolute origin' and 'Reference to relative origin'. The 'Other' section contains checkboxes for 'Optimize change location commands', 'Generate separate NC Drill files for plated & non-plated holes', 'Use drilled slot command (G85)', and 'Generate Board Edge Rout Paths'. At the bottom of the 'Other' section is a text field for 'Rout Tool Dia' with the value '200mil'. At the very bottom of the dialog are 'OK' and 'Cancel' buttons.

NC Drill Setup

Options

NC Drill Format

Specify the units and format to be used in the NC Drill output files.

This controls the units (inches or millimeters), and the number of digits before and after the decimal point.

Units

☒ Inches

☐ Millimeters

Format

☐ 2:3

☒ 2:4

☐ 2:5

The number format should be set to suit the requirements of your design. The 2:3 format has a 1 mil resolution, 2:4 has a 0.1 mil resolution, and 2:5 has a 0.01 mil resolution. If you are using one of the higher resolutions you should check that the PCB manufacturer supports that format. The 2:4 and 2:5 formats only need to be chosen if there are holes on a grid finer than 1 mil.

Leading/Trailing Zeros

☒ Keep leading and trailing zeroes

☐ Suppress leading zeroes

☐ Suppress trailing zeroes

Coordinate Positions

☒ Reference to absolute origin

☐ Reference to relative origin

Other

☒ Optimize change location commands

☐ Generate separate NC Drill files for plated & non-plated holes

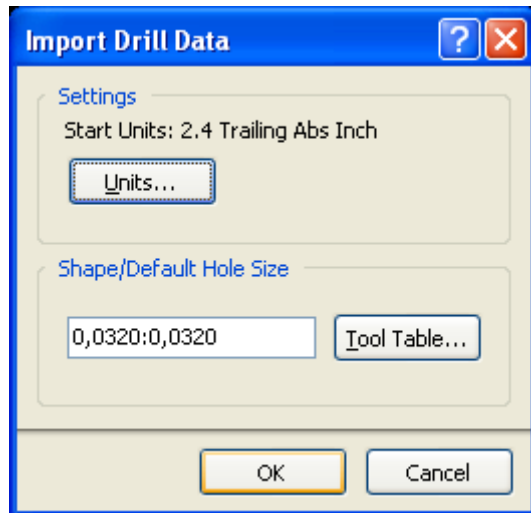
☐ Use drilled slot command (G85)

☐ Generate Board Edge Rout Paths

Rout Tool Dia: 200mil

OK Cancel

Datenaufbereitung für die LPKF-Fräse

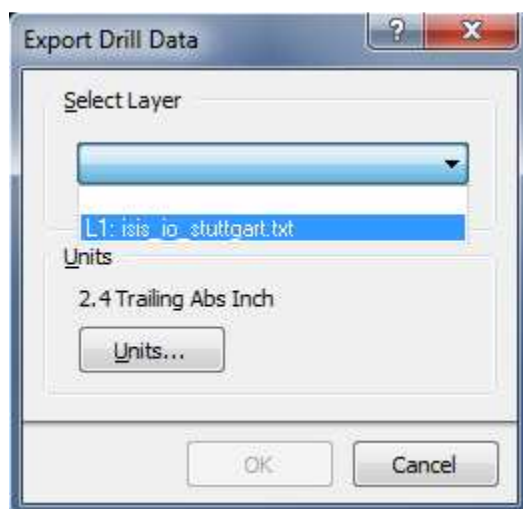


<OK>

Es wird automatic CAMtastic geladen. Dies kann ignoriert werden.

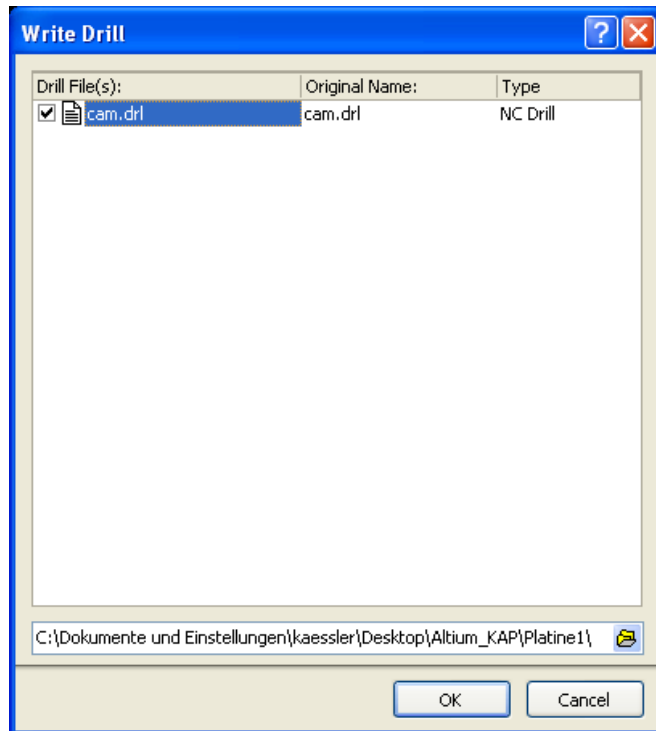
Export der Bohrdaten:

- File → Export → Save Drill...



<OK>

Datenaufbereitung für die LPKF-Fräse



Es wird die .drl (Bohrdaten) erzeugt

Alle relevanten Dateien sind jetzt erstellt!