Milling Circuit Boards with CircuitPro and S63 LPKF Machine

Instituto Tecnológico de Morelia
Maestría en Ciencias en Ingeniería Electrónica
"José María Morelos y Pavón"

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Machine Setup

Figura: Hardware configuration

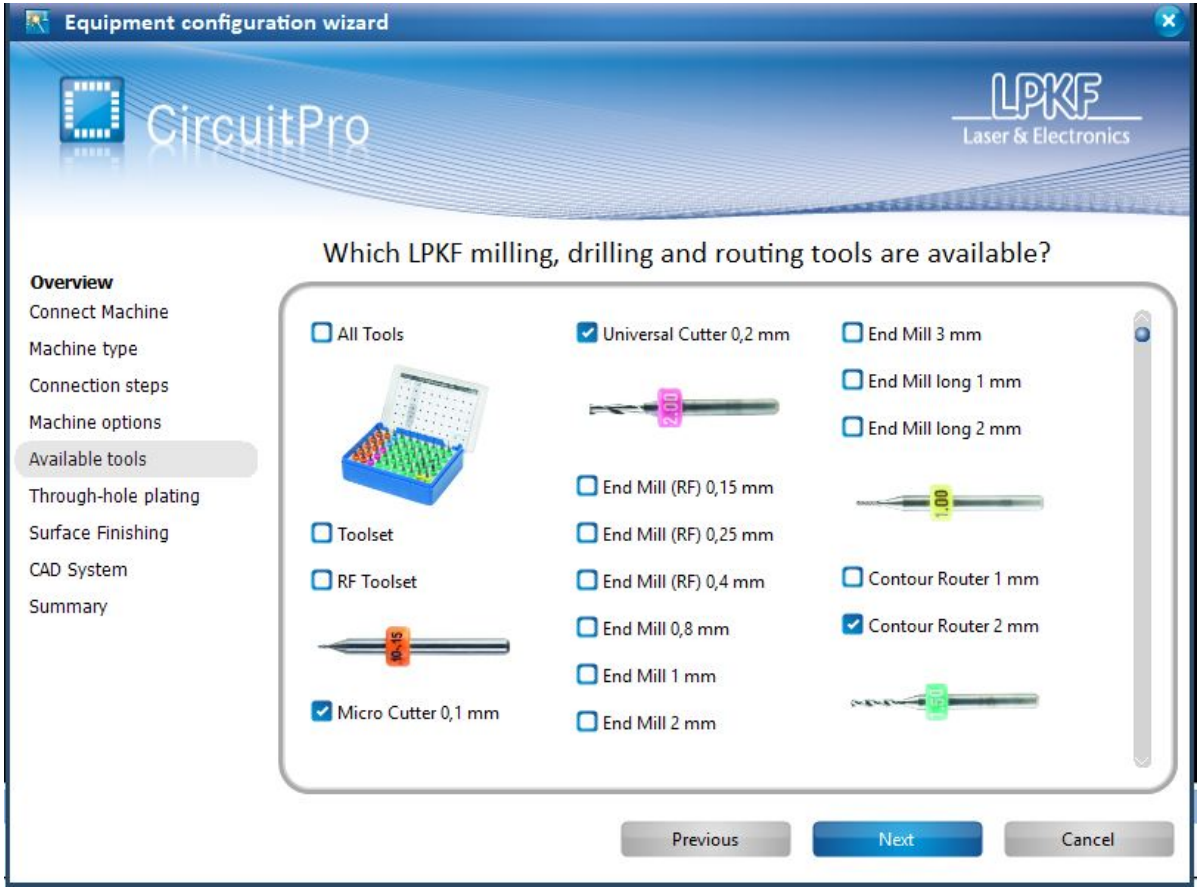
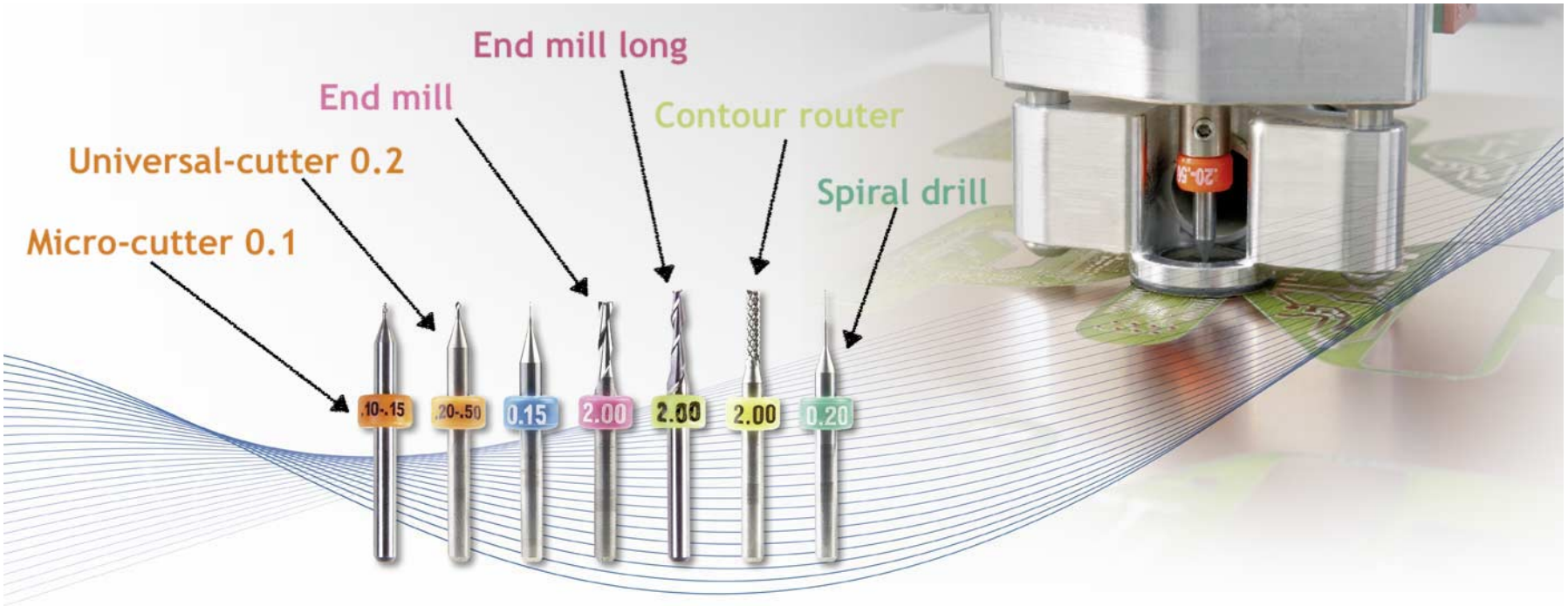
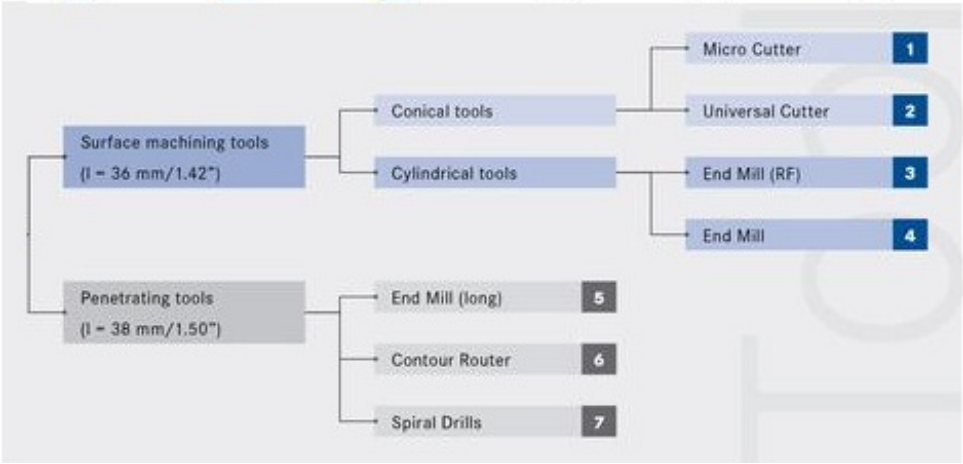


Figura: Tool selection window

Milling and Drilling Tools



38 mm (1.5")
36 mm (1.42")
.10-.15
.20-.50
0.15
2.00
2.00
2.00
0.20
1
2
3
4
5
6
7


Surface machining tools
(l = 36 mm/1.42")
Conical tools
Cylindrical tools
Micro Cutter 1
Universal Cutter 2
End Mill (RF) 3
End Mill 4
Penetrating tools
(l = 38 mm/1.50")
End Mill (long) 5
Contour Router 6
Spiral Drills 7

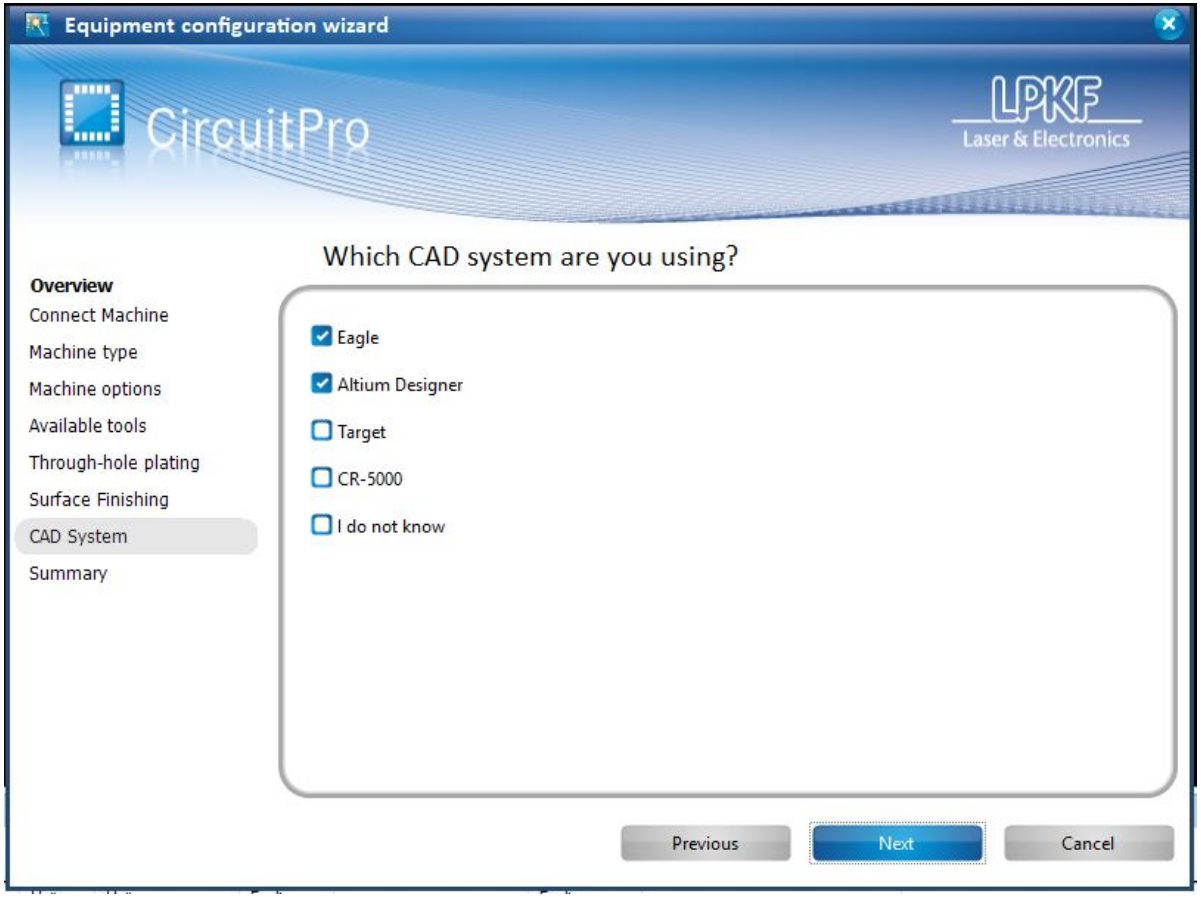


Figura: CAD Software Selection

GUI

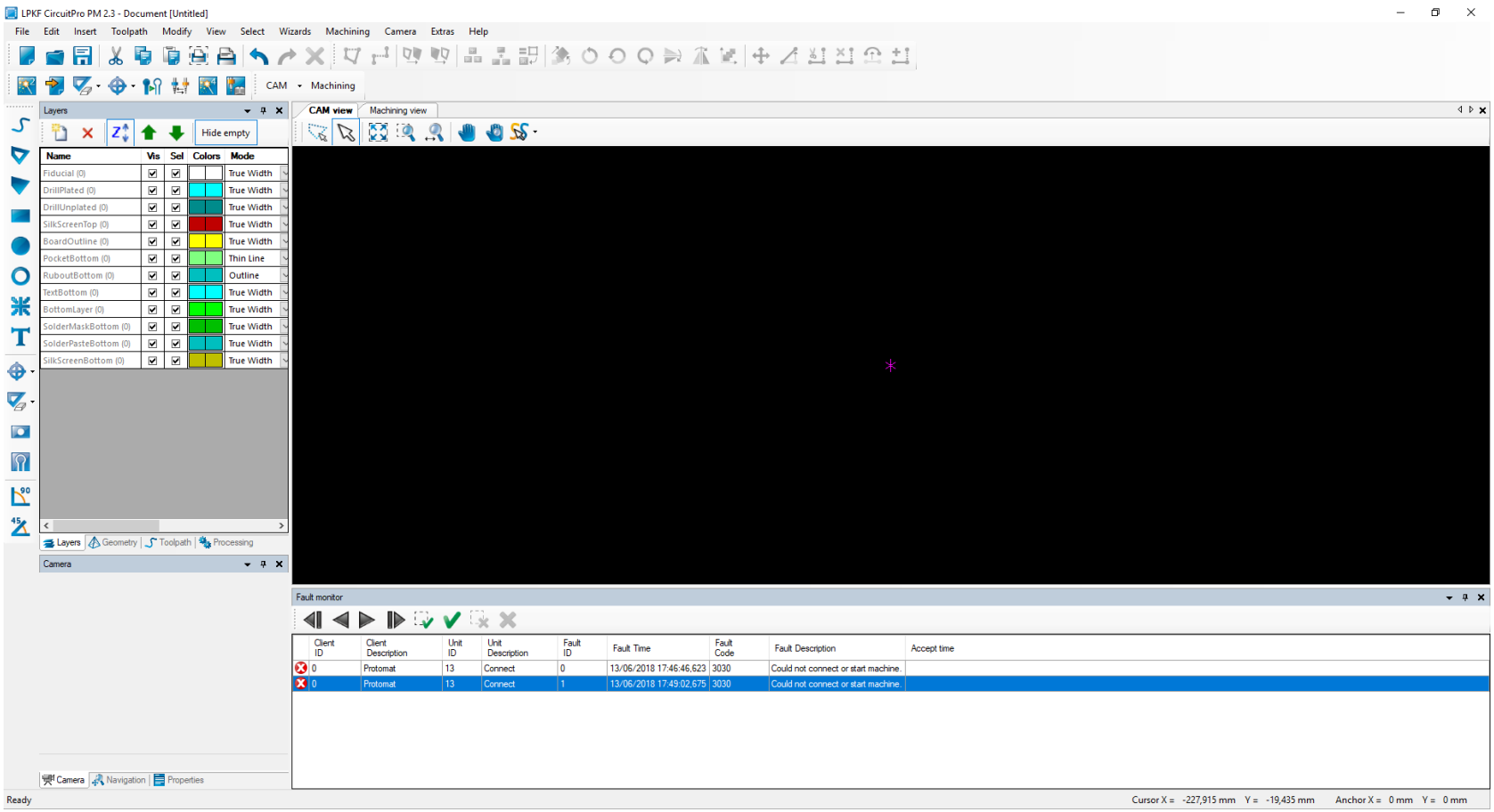


Figura: The CircuitPro Graphic User Interface

Project stages

Once the machine has been configured, most of the PCBs follow the next process:

- Load a template project **(Single Side, Double Side, ...)**
- Import the **Gerber** files
- Create the tool-paths and link the tools
- Board Production

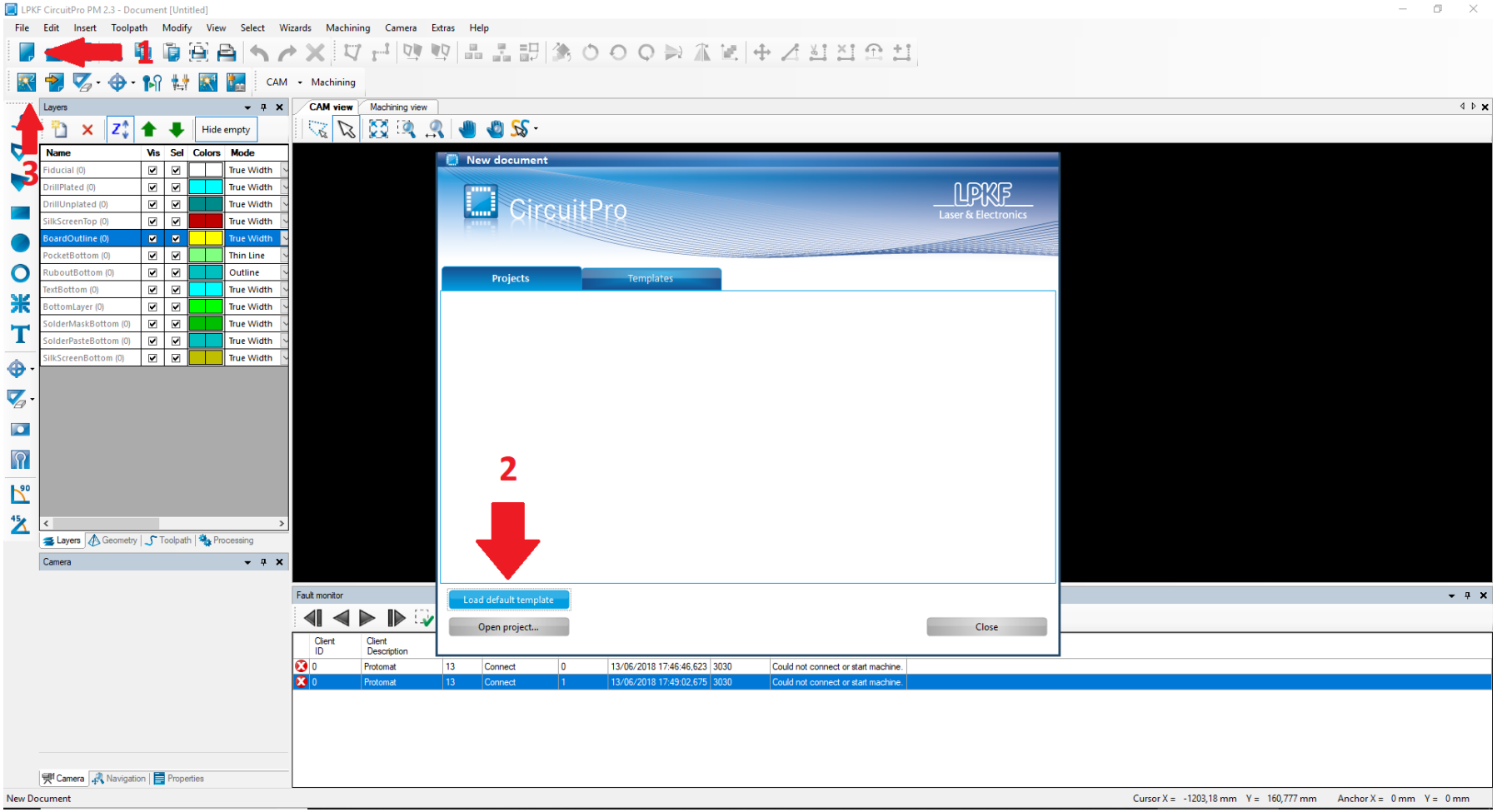


Figura: Cargar plantilla predeterminada

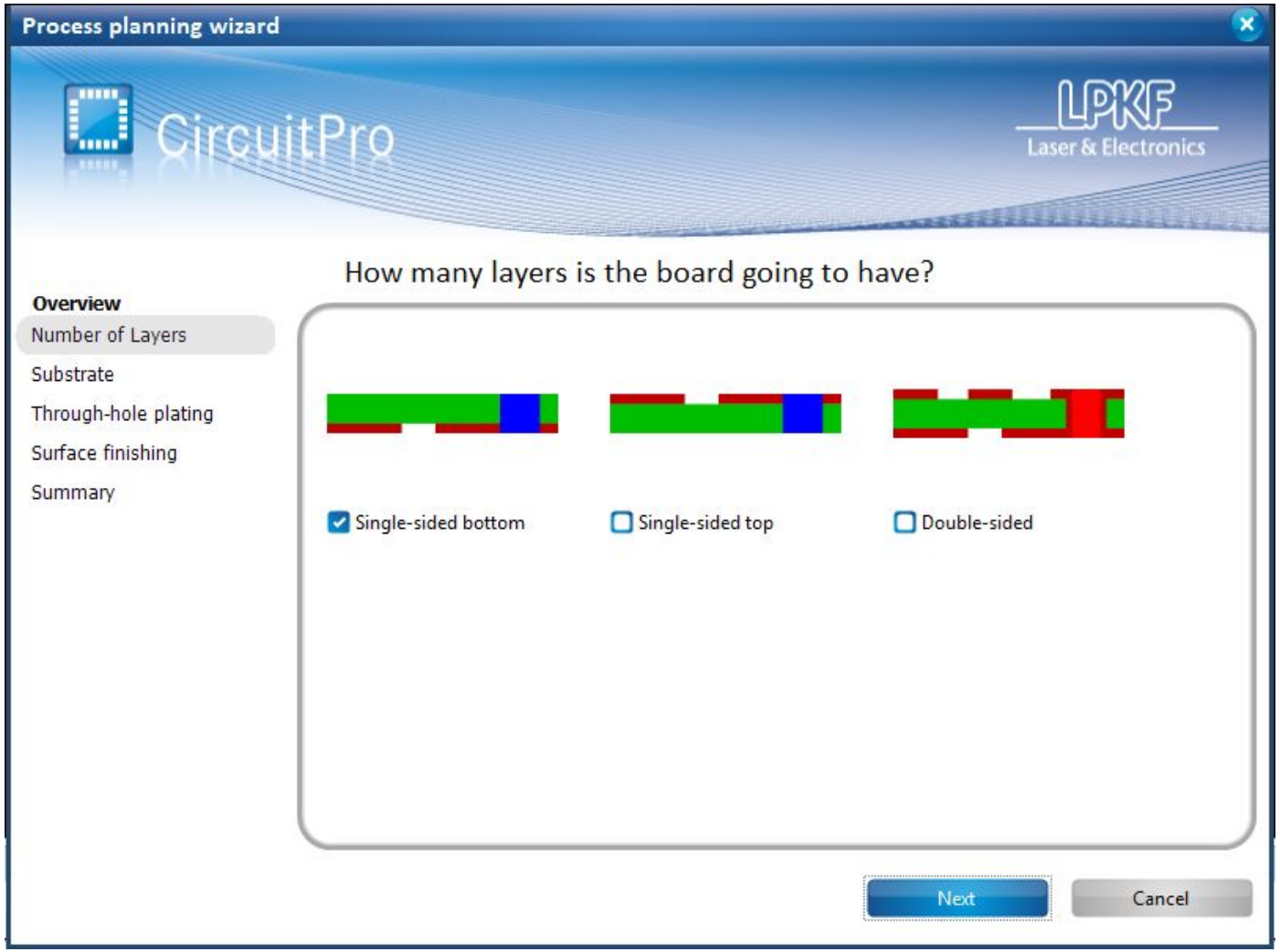


Figura: Selección de tipo de PCB

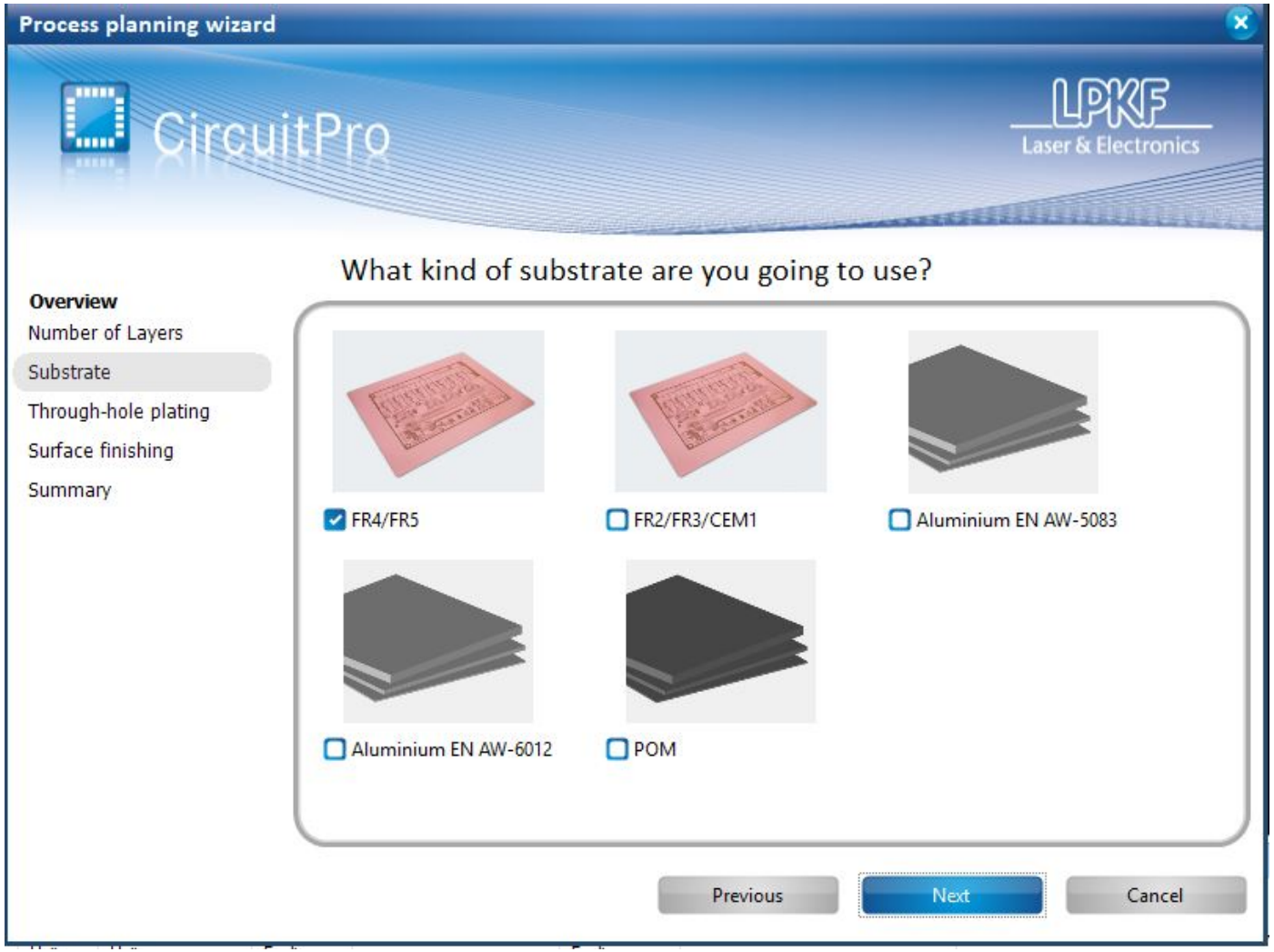


Figura: Selección de material

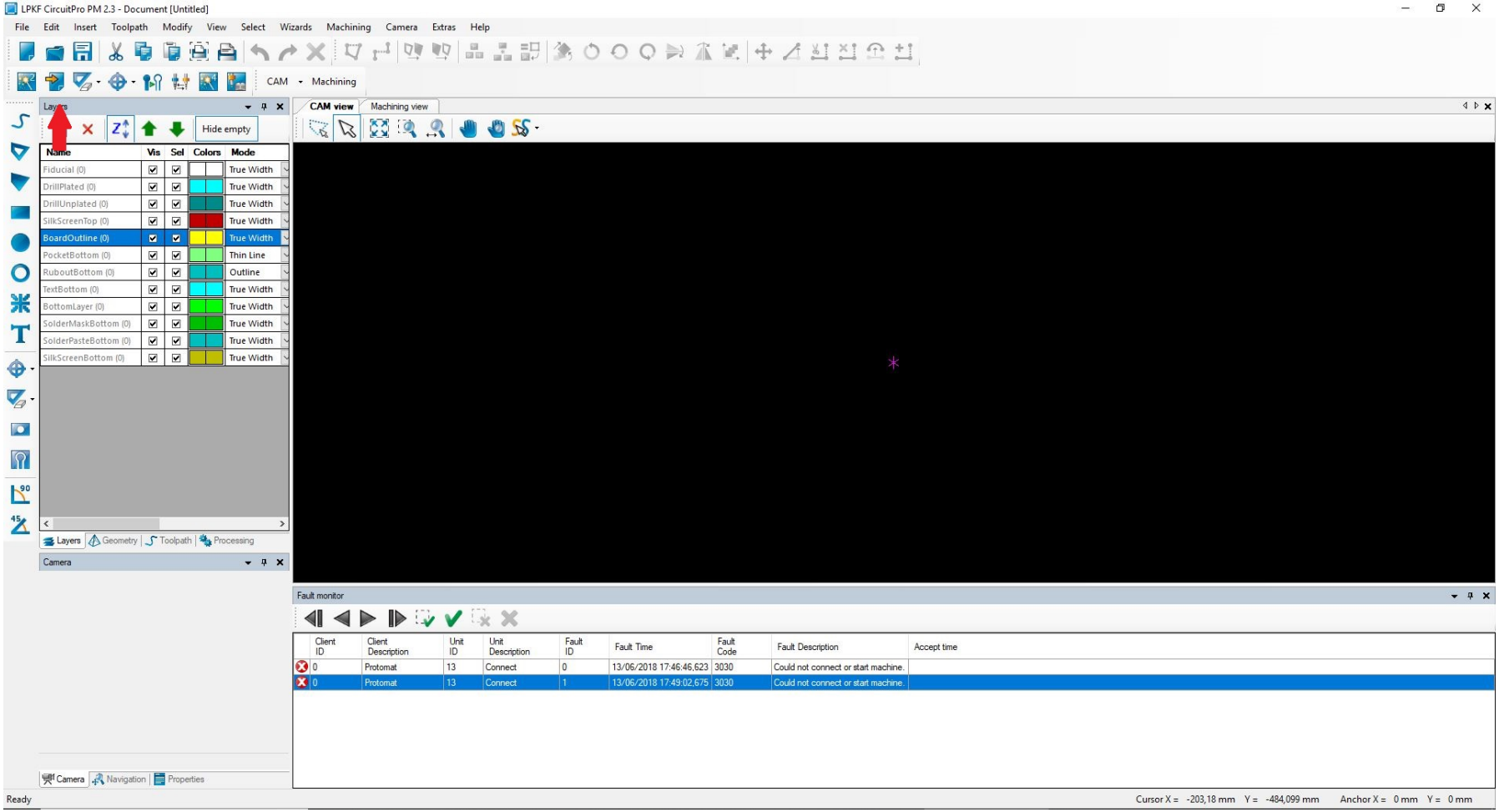


Figura: Layer files importing

Allowed files

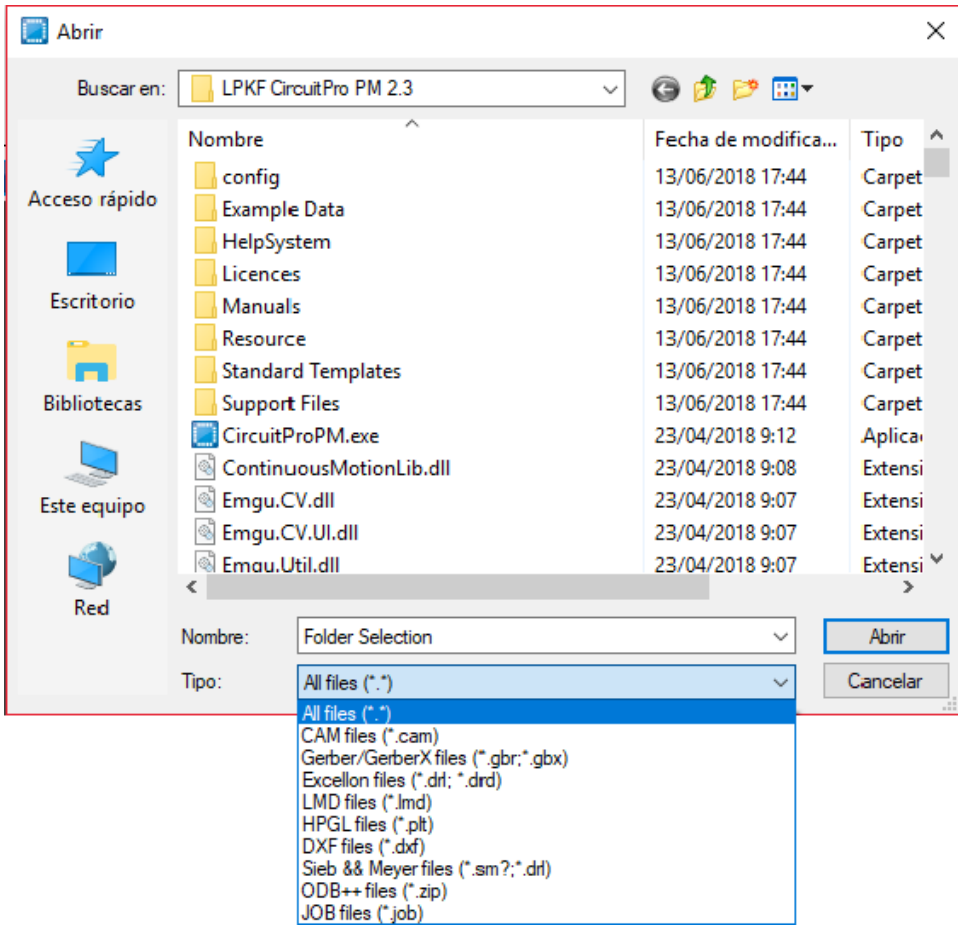


Figura: Archivos admitidos

The file extension depends on the CAD software used. For Altium, the layers generated are the KeepOut, Botton Layer and Top Layer, respectively (`*.GKO, *.GBL y *.GTL`).

Tipos de archivos admitidos

Botton layer

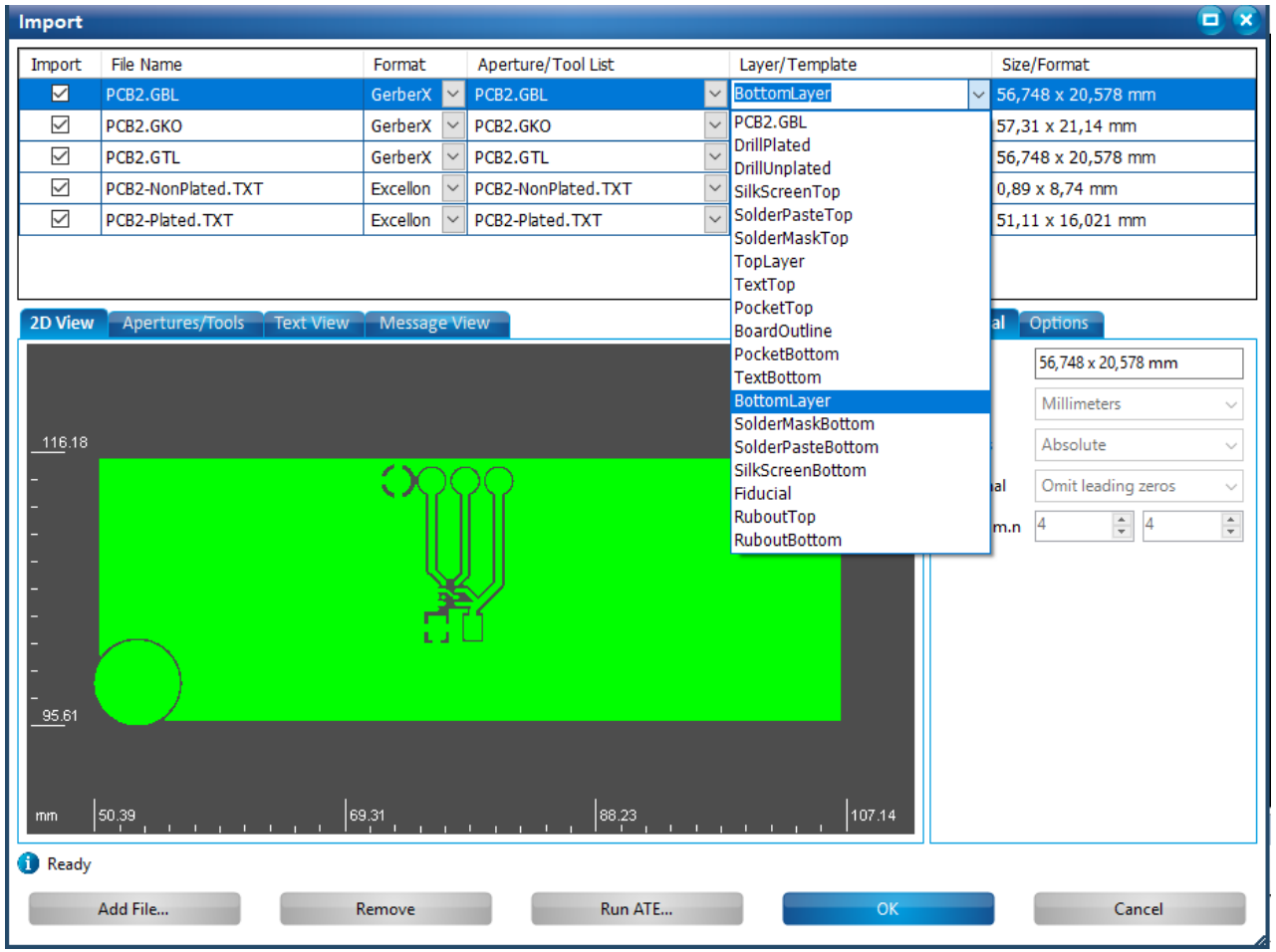


Figura: Botton layer file

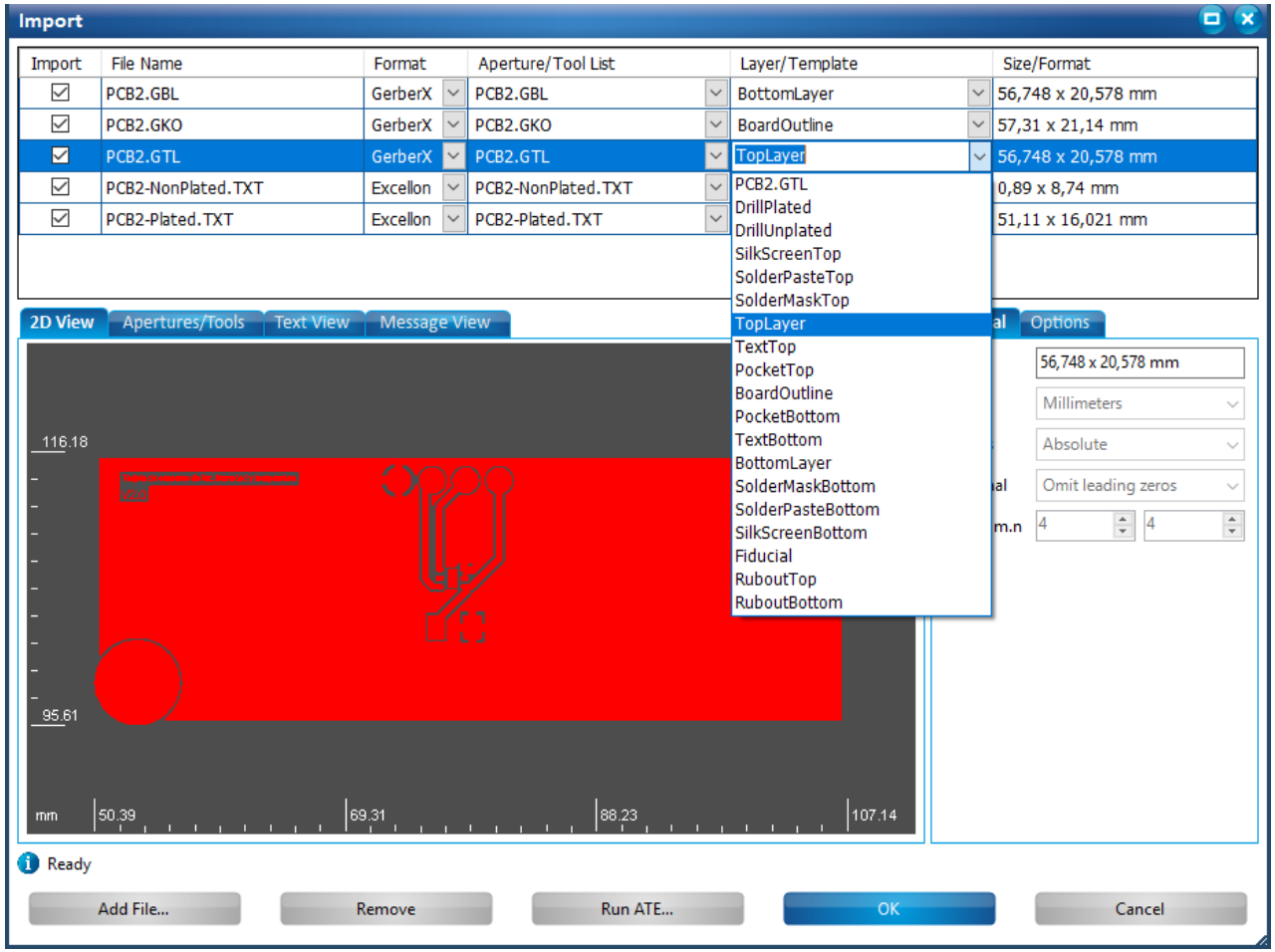


Figura: Top layer file

The Drill Layers

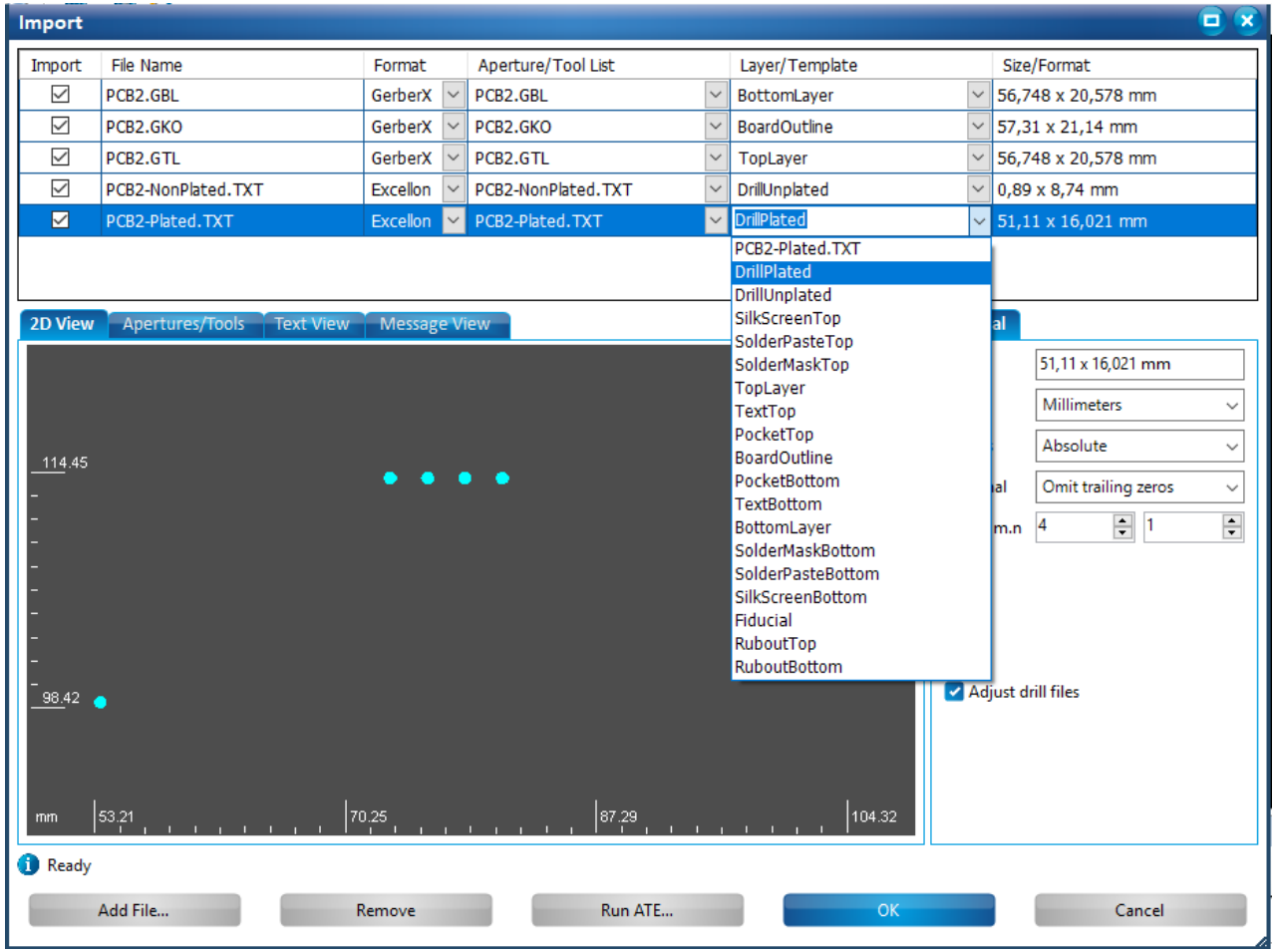


Figura: Drill layer importing

Capas de corte

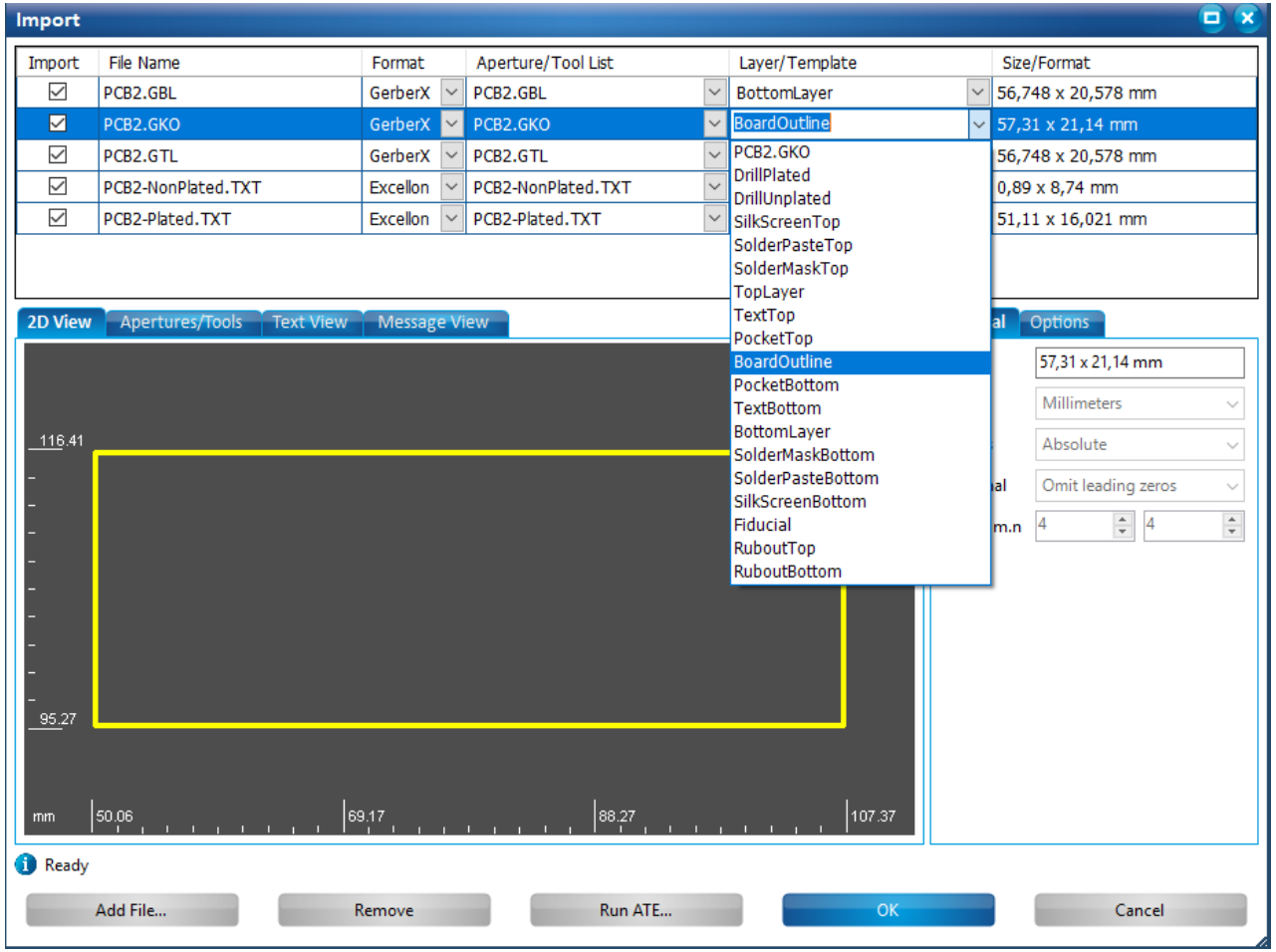


Figura: The board Outline Layer