

Material

We use only FR4 Material.

Printed Circuit Boards consist of a non electrical substrate where one or two copper foils were laminated on.
The substrate of FR4 consists of a glass fibre fabric which is soaked with epoxy resin.

Number of Layer

We deliver PCBs from 2 till 8 Layers.

PCBs with two layers were called double sided PCB.
PCBs with more than two layers were called Multilayer.
Hereby several Innerlayer Cores were pressed together with Prepregs (glass fibre fabric soaked with epoxy resin).

PCB Thickness

Available are PCBs with
1,00mm
1,55mm
2,40mm
Thickness

Available PCB Size

The maximal producible PCB Size is
280,00 x 430,00mm maximal

Final Copper Thickness

You will choose between
35µm
70µm
Final Copper Thickness on Inner- and Outerlayers

Layout

Trackwidth / Trackspacing	150µm / 150µm
Spacing Pad / Pad	150µm
Spacing Track / Pad	150µm
Annular Ring	≥ 250µm

The Annular Ring is the copper ring around a drill.
Annular Ring = Pad-Ø minus Drill-Ø

Solder Mask

The Solder Mask fulfills different functions on the PCB. It serves for Protection of the PCB from corrosion, mechanical damage and prevents a moistening of certain surfaces when soldering the PCB. Moreover the Solder Mask improves electrical characteristics like the dielectric strength.

During manufacturing a PCB it can come between the manufacturing processes to Deviations. To avoid printing on a copper pad the pads of the solder mask will made larger than the pads on the copper layer.

Type	Photoimagable Solder Mask
Solder Mask Clearence	Colour green
Minimum Bridge Size	100µm
	70µm

Finish Surface

To prevent oxidation of the open copper on the PCBs surface and allow perfectly soldering, the surface can be protected with several materials.

We offer you the following Finish Surfaces:

HAL leadfree	with the HotAirLeveling the PCB is dipped in liquid tin. The tin adheres on the copper surface. The redundant tin is blown off by air
Tin (Sn)	With the surface Tin, Silver, Nickel/Gold
Silver (Ag)	by an immersion process a thin layer of metal is applied to PCB surface.
Nickel/Gold (Ni/Au)	The advantages are: less thermal load, defined thickness of the metal layer and there can be denser structures on the PCB.

Mechanical Treatment

On the beginning of each PCB the drills for the plated through holes must be drilled. The drill bits are made of tungsten carbide.

Drill bits are available from
0,30mm Minimum Drill Diameter
till
6,00mm Maximum Drill Diameter

Should there be bigger break throughs brought in during the first drill run, there is a possibility to bring in this break throughs with routing or nibbling. Nibbling means that drills are set in a short distance to produce the designated form.

To produce the PCB outline we can use the mechanical processes
Routing and
Scoring

With notching the surface of the PCB becomes a defined remaining web. The scoring bit has an angle of 30°. The PCBs can be broken afterwards simply apart.

Legend Printing

The legend printing serves to it to facilitate the placement of the parts on the PCB. The printing is applied with a silk screen printing. With a fine fabric covered with a mask the lacquer is printed on the PCB

Colour white

E-Test

In E-test procedure the PCB is checked for electrical defects. By putting a voltage on the various endpoints of the PCB defects like shorts and opens can be detected.

For double sided boards we offer E-Test optionally.
For Multilayers (> 2 Layers) E-test is inclusive.