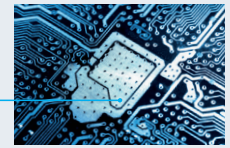


Capabilities



The technical capability specifies the standard product class according to IPC-A-600H and IPC/JPCA-4140 for HDI constructions and micro via materials.

Core business

- PCB prototyping
- Volume production
- PCB counselling and service

Special PCB services

- High-end technology and quality from approved manufacturers in Asia
- High-speed delivery from standard 5-7 working days down to 24 hours from manufacturers in Europe
- PCB layout, layout review, and DRC/check
- DFM counselling

Suppliers approvals

- UL94 approval
- UL796
- ISO 14001/9001
- IPC 6012
- IPC PCQR2
- ISO13485 for medical
- ISO/TS16949 for automotive
- PPAP
- MIL-PRF-31032
- AS9100

Product range

- Rigid PCBs from 1-76 layers (HDI is supported up to 7+N+7)
- Flex PCBs from 1-14 layers
- Rigid-flex PCBs from 1-20 layers (up to 10 layer flex)(supports HDI)
- HDI boards with blind/buried via down to 100 μ m
- Heavy copper PCB with up to 420 μ m in multilayer constructions
- ALU heat sink PCBs with several bonding technologies and thermal management
- PCBs with RF- and high speed materials
- Line card and PCBs with embedded components and laser drilling

PCB formats

- Gerber & Extended Gerber
- HPGL, DXF & ODB++ (IPC356A net list)

Maximum board size

- 620 mm \times 900 mm

Minimum board size

- 25 mm \times 25 mm (if less than 25 mm \times 25 mm – needs to be in frames)

End thickness of PCB

- 0.15 mm – 12 mm

Base material

- FR4
- FR4 medium Tg
- FR4 high Tg
- Rogers HF laminate
- Polyimide
- Teflon laminate

Layer specifications

- Number of layers Max. 56 layers
- Thickness of inner layer core Min. 0.1 mm
- Spacing between layers Min. 0.05 mm
- Thickness of laminate $\pm 10\%$
- Finished hole size (PTH) tolerance ± 0.075 mm
- Finished hole size (NP) tolerance ± 0.05 mm
- Copper plating IPC 6012B

Fineline specifications

	EU	Asia	Standard	Limit
9 μm Innerlayer	50 μm	50 μm	80 μm	50 μm
12 μm Innerlayer	50 μm	66 μm	90 μm	50 μm
18 μm Innerlayer	50 μm	80 μm	100 μm	50 μm
35 μm Inner-/Outerlayer	50 μm	90 μm	125 μm	50 μm
43 μm Inner-/Outerlayer	100 μm	100 μm	150 μm	100 μm
70 μm Inner-/Outerlayer	150 μm	150 μm	250 μm	150 μm
105 μm Inner-/Outerlayer	200 μm	180 μm	300 μm	180 μm
140 μm Inner-/Outerlayer	250 μm	225 μm	350 μm	225 μm
175 μm Inner-/Outerlayer	250 μm	250 μm	400 μm	250 μm
210 μm Inner-/Outerlayer	250 μm	300 μm	500 μm	250 μm

Through holes - mechanical

- Hole (nominal) Min. 0.15 mm

Blind via - mechanical

- Hole (nominal) Min. 0.10 mm

Aspect ratio - through holes

- Depth: diameter of hole Std. 6:1 Max 24:1

Aspect ratio - blind via

- Depth: diameter of hole Std. 0.7:1 Max 1:1

Positioning

- Drilling positioning ± 0.075 mm
- Milling positioning ± 0.050 mm

Impedance

- Tolerance standard $\pm 10\%$
- Tolerance advanced $\pm 5\%$

Edge plating

- Edges & slots Yes

Solder mask

- Thickness Min. 25 μm
- Bar width Min. 75 μm

Component notation

- Pattern width Min. 0.15 mm
- Solder pads clearance Min. 0.20 mm

Peelable mask

- Min. area \varnothing 2.00 mm
- Solder pads clearance Min. 0.1 mm
- Distance mask/solder Min. 0.1 mm

Surface finishes

	EU	Asia
LF HASL	Yes	Yes
ENIG	Yes	Yes
Immersion tin	Yes	Yes
Immersion silver	Yes	Yes
OSP	Yes	Yes
ENEPIG	Yes	Yes
HALS (Sn-Pb)	Yes	Yes
Electrolytic Ni/Au	Yes	Yes
DIG	No	Yes
Electroless nickel - immersion palladium	No	No
Carbon ink	Yes	Yes
Blue mask	Yes	Yes

Milling track

- Standard 2.40 mm
- Min. milling track 0.80 mm
- Positioning \pm 0.050 mm

Chamfer

- Angle 45° / 30° / 20°

V-cut

- Thickness 0.8 - 2.4 mm