

LinkPCBA PCB Technical Capability 2025

Ensuring Precision, Reliability, and Advanced Process Control in PCB Fabrication

Issued by LinkPCBA Engineering Department — Updated April 2025

1. Material System

Type	Material / Brand	Notes
FR4 (General)	Shengyi, KB, ITEQ, GDM	Standard TG
FR4 (High TG)	S1171, S1000-2, FR408, FR408HR, IT180A, N4000-13	High-TG materials
Halogen-Free	S1155, S1165	Lead-free and eco-friendly
PTFE	Rogers 4003/4350/4450, Taconic TLX/TLY, Arlon AD series	High-frequency boards
Metal Base	Aluminum, Copper, Iron	1–4 Layers
Hybrid Lamination	FR4 + Aluminum, FR4 + Rogers	Mixed stack-up design

2. Layer & Thickness Capability

Parameter	Capability
Layers	1–30 Layers (Sample) / 1–20 Layers (Mass)
Board Thickness	0.13 – 7.0 mm
Copper Weight	Inner: 1/3–6 oz, Outer: 1/2–6 oz
Max Board Size	570 × 850 mm
Min Thickness (4L)	0.6 mm
Aspect Ratio	12:1

3. Drilling & Hole Control

Type	Capability
Mechanical Hole	0.1–6.2 mm
Laser Hole	0.1 mm (depth $\leq 65\ \mu\text{m}$)
Blind/Buried Via	$\leq 0.3\ \text{mm}$
Back Drilling	0.5–6.5 mm
Slot Width	$\geq 0.5\ \text{mm}$
Tolerance	$\pm 0.076\ \text{mm}$
Impedance Control	$\pm 5\Omega$ ($< 50\Omega$), $\pm 10\%$ ($\geq 50\Omega$)

4. Etching & Line/Space

Copper Weight	Inner Layer (Line/Space)	Outer Layer (Line/Space)
1/3 oz	3/2.5 mil	4.5/3 mil
1 oz	4/3 mil	5.5/4 mil
2 oz	6/3.5 mil	7/5 mil
3 oz	8/4 mil	9/5 mil

5. Surface Finishes

HASL (Lead-Free), ENIG, ENEPIG, Immersion Silver, Immersion Tin, OSP, Hard Gold, Plated Gold Fingers, Pattern Plating, etc.

Thickness Range:

Nickel: 3–5 μm

Gold: 0.03–0.1 μm

Tin: ≥ 1.0 μm

Silver: 0.1–0.3 μm

6. Solder Mask & Silkscreen

Item	Capability
Solder Mask Color	Green, Matte Black, Matte Green, Blue, Red, White
Silkscreen Color	White, Yellow, Black
Min. Solder Mask Bridge	4 mil
Min. Silkscreen Width	5 mil
Mask Thickness	15–25 μm on copper
Hardness	≥6H

7. Tolerances & Accuracy

Parameter	Tolerance
Hole Position	±0.076 mm
Board Outline	±0.1 mm
Thickness	±8–10%
Layer Alignment	≤5 mil
Impedance	±5 Ω or ±10%

8. Advanced Technologies

HDI, Buried & Blind Vias, Back Drilling, Via Plugging, Half Holes, Gold Fingers, Metallized Edge, High-Frequency & Aluminum Substrate Boards.

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Data summarized based on internal engineering parameters (updated April 2025).