STECH PCBA

Capability Sheet

PCB FABRICATION & ASSEMBLY · REV. OCTOBER 2026

PCB fabrication and assembly, built to specification.

From quick-turn prototypes to 120-layer, 8+N+8 HDI and RF builds — engineered, fabricated, assembled and tested under one quality system.

25+	3K+	100%	18
Years in operation	Projects completed	On-time delivery	Board technologies

ISO 9001 · IATF 16949 · UL Certified · IPC Class 2/3

01 Process limits

Layer count (max)	120
HDI structure	8+N+8
Board thickness (max)	7 mm
Min DHS	6 mil
Aspect ratio	30:1 · 35:1 †
Min microvia size & aspect ratio	3 mil & 1:1
Min core thickness	1 mil
Overall layer registration	±4 mil · 5 mil †
Impedance tolerance	5%
Back drill stub	0–4 mil · 2–10 mil †
Copper fill	Yes
Skip-via (L1–3)	Yes
Line / space, inner, ½ oz + plating	1.7 / 1.7 mil
Line / space, inner, 2 oz	6 / 6 mil
Line / space, outer, ¼ oz + plating	3 / 3 mil
Line / space, outer, ½ oz + plating	4 / 4 mil

† Varies by board type — both supplied figures shown. DHS = Drilled hole size; HDI 8+N+8 = Eight build-up layers on each side of an N-layer core.

02 Fabrication capabilities

ADVANCED TECHNOLOGY

- Layer count — Up to 120 layers
- High layer count HDI PCBs
- High layer count optical modules
- ATE test boards and burn-in boards

SIGNAL INTEGRITY & TESTING

- Insertion loss measurement — SET2DIL / Delta L / VNA

MATERIALS EXPERTISE

- FR4 High Tg (ITG)
- Rogers 4350
- Rogers 4003

ADVANCED CAPABILITIES

- Embedded components — Capacitor / Resistance
- Copper coin technology

03 Laminate loss tiers

Ultra Low Loss	Megtron 8, Megtron 9, Megtron 7
Very Low Loss	Megtron 6
Low Loss	Megtron 4
Medium Loss	Megtron 2

Ordered lowest loss first. Signal integrity verified by SET2DIL / Delta L / VNA insertion-loss measurement.

04 Services

Engineering & Design
Schematic capture, PCB layout and DFM review

Fabrication & Assembly
Bare boards through fully assembled and tested PCBAs

Full Turnkey
Fabrication, component sourcing and assembly in one order

Request a quote

Send Gerbers, stack-up and BOM: www.stechpcba.com/request-a-quote

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05 Board technologies

TECHNOLOGY	MAX LAYERS	TRACE / SPACE	MIN HOLE	MATERIALS	SURFACE FINISHES
High Layer Count PCB	120	2.2 / 2.2 mil	0.1 mm	370HR, S1000-2, IT180A, EM825, MT40, Megtron 4, Megtron 6, Megtron 8, Tachyon 100G, RO4350B, RO4003C, RT/duroid 6002, RO3006	HASL, ENIG, Immersion Tin, OSP, Immersion Silver, Gold Finger, Electroplated Hard Gold, Selective OSP, ENEPIG
HDI PCB, Multilayer PCB, High-Complexity PCB, ATE PCB	120	2.2 / 2.2 mil	0.1 mm	370HR, S1000-2, IT180A, EM825	HASL, ENIG, Immersion Tin, OSP, Immersion Silver, Gold Finger, Electroplated Hard Gold, Selective OSP, ENEPIG
Rigid PCB	120	2.2 / 2.2 mil	0.1 mm	370HR, S1000-2, IT180A, EM825, AP8525R, AP8515R, LF0100, LF0130, LF0200	HASL, ENIG, Immersion Tin, OSP, Immersion Silver, Gold Finger, Electroplated Hard Gold, Selective OSP, ENEPIG
Copper Inlay PCB	30	4 / 4 mil	0.25 mm	FR4 High TG Copper up to 30 oz	ENIG, HASL-LF
Flexible PCB (FPC)	10	2.5 / 2.5 mil	0.1 mm	PI (polyimide)	ENIG
Metal Core PCB (MCPCB), Aluminium PCB	8	4 / 4 mil	0.25 mm	5052, 6061	ENIG, OSP, HASL-LF
Rigid-Flex PCB	28	3 / 3 mil	0.1 mm	FR4 High TG + PI, AP8525R, AP8515R, LF0100, LF0130, LF0200	ENIG, Immersion Tin, OSP, HASL-LF, Immersion Silver, Gold Finger, Electroplated Hard Gold, Selective OSP, ENEPIG
Burn-in Board	38	2.5 / 2.5 mil	0.1 mm	Polyimide / High Temp FR4	ENIG, ENEPIG, Selective Hard Gold / Soft Gold
Probe Card	52	2.5 / 2.5 mil	0.1 mm	Polyimide, Megtron 6G, Megtron, Isola	ENIG, ENEPIG, Selective Hard Gold / Soft Gold

HASL = hot air solder leveling (-LF lead-free); ENIG = electroless nickel immersion gold; ENEPIG = electroless nickel electroless palladium immersion gold; OSP = organic solderability preservative. Also available: embedded capacitors and resistors, copper coin, high layer count optical modules. Other technologies — standard, high-frequency, high-Tg, prototype and substrate-like PCB — are quoted per design.

06 PCB assembly

Assembly types	SMT, through-hole (THT) and mixed technology
Board sides	Single- and double-sided
Smallest passives	01005 (0402 metric)
Fine-pitch packages	BGA and QFN down to 0.35 mm pitch
Board size	Up to 460 × 500 mm; under 70 × 70 mm in panels
Order quantity	No minimum — 1 piece to volume
Soldering	Lead-free (RoHS) and leaded
Workmanship	IPC-A-610 Class 2 and Class 3
Component supply	Full turnkey, consigned or partially consigned

07 Inspection & added services

SPI · AOI · X-ray · ICT · Functional test · Conformal coating · Box build

08 Quality

ISO 9001 · IATF 16949 · UL Certified · IPC Class 2/3

In-house test lab with reliability testing facilities. 100% on-time delivery record.

Figures are maximum process capabilities.
Achievable combinations are confirmed at engineering review; lead time is quoted per design.

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