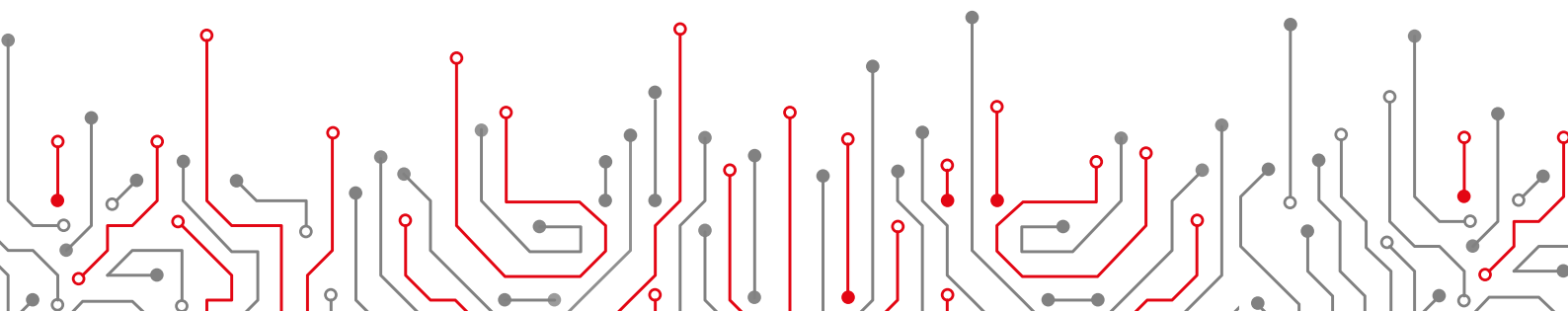
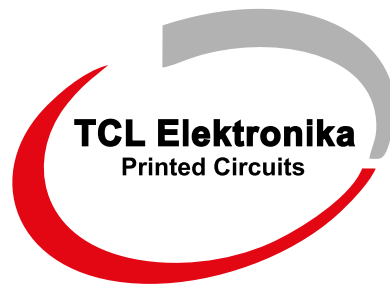
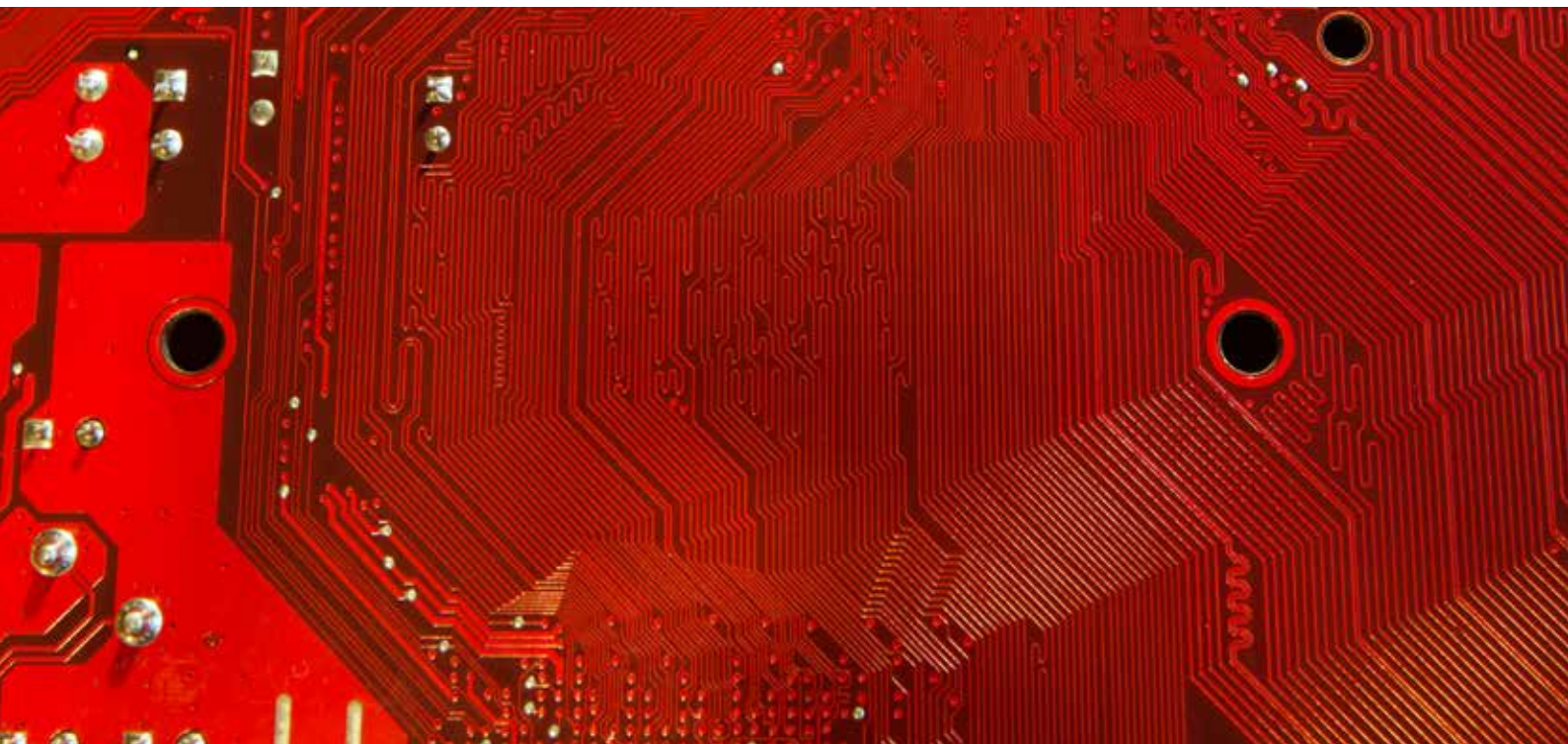


# CAPABILITIES

Anything is possible





	Standard	Advanced
<b>CIRCUIT / PANEL SIZE</b>		
Single Sided	Max. 510 x 610mm	
Double Sided Non PTH	Max. 510 x 610mm	
Silver Through Hole	Max. 510 x 610mm	
PTH	Max. 457 x 610mm	Max. 610 x 1000mm
Multilayer	Max. 457 x 610mm	Max. 610 x 1000mm
Layer count	Up to 20	Up to 58

### MATERIALS

FR1	Yes	Yes
FR2	Yes	Yes
CEM-1	Yes	Yes
CEM-3	Yes	Yes
FR4 (Standard & Hi-TG)	ITEQ, Kingboard, Shengyi, Nanya, Grace, Isola, Ventec, EMC	Nelco, Rogers, Panasonic, Taconic, others available on request
Polyimide	Ventec, Arlon, Nelco	
Aluminium	Denka, Bergquist, Laird, Ventec	Denka, Bergquist, Laird, Ventec
Ceramic	Al <sub>2</sub> O <sub>3</sub> , AlN, SiN (DBC, DPC & AMB)	Al <sub>2</sub> O <sub>3</sub> , AlN, SiN (DBC, DPC & AMB)
Pre-pregs	106,1080, 2113, 2116, 2125, 7628	106,1080, 2113, 2116, 2125, 7628, 106NF, 1080NF
Other Materials	Please enquire	Please enquire

### COPPER FOIL

Single Sided	½oz (18µm) – 2oz (70µm)	30oz (1050µm)*
PTH	½oz (18µm) – 6oz (210µm)	30oz (1050µm)*
Multilayer (Outer layers)	12µm – 6oz (210µm)	30oz (1050µm)*
Multilayer (Inner Layers)	½oz (18µm) – 6oz (210µm)	15oz (525µm)*
Metal Clad PCB	1oz (35µm) – 6oz (210µm)	30oz (1050µm)*
ASPECT RATIO	10:01	16:01

\*Maximum copper thickness depends on design.

### SURFACE FINISHES

Hot Air Solder Level	Yes	Yes
Lead Free Hot Air Solder Level	Yes	Yes
ENEPIG	Yes	Yes
EPAG	Yes	Yes
Immersion Gold (ENIG)	Yes	Yes
Immersion Silver	Yes	Yes
Immersion Tin	Yes	Yes
Hard Gold & Gold Finger	Yes	Yes
OSP	Yes	Yes



	Standard	Advanced
<b>SOLDER MASKS, IDENTS AND CARBON</b>		
Photoimageable (LPI) Solder Mask	Green, Blue, White, Black	Red, Orange, Purple, Grey & others on request
Via Plugging	Yes	Yes
Peelable Solder Mask	Standard & Hi-Temp—Blue, Green, Red	Standard & Hi-Temp—Blue, Green, Red
UV Curable ident (Silkscreen)	White, Yellow, Black	Green, Red, Blue, Brown
Carbon Key Pads	Yes	Yes
Carbon Links	No	Yes

### CNC DRILLING

Min. Finished Hole Size (Mechanical)	0.20mm	0.10mm
Min. Finished Hole Size (Laser)	0.10mm	0.05mm
Minimum Punched Hole Size	0.80mm	0.70mm

### TOLERANCES

Track & Gap	±20%	±10%
Layer Registration	±0.10mm	±0.10mm

### HOLES

Hole Diameter (PTH)	±0.075mm	±0.050mm
Hole Diameter (Non-PTH)	±0.10mm	±0.050mm
Hole Diameter (Punched)	±0.15mm	±0.10mm
Hole Location	±0.05mm	

### ETCHING

Track & Gap	±20%	±10%
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### SOLDER MASK

Via Plugging (100% Fill)	-20%	-10%
Via plugging hole size	≤0.50mm	≤0.60mm
Registration	0.025mm	0.020mm
Solder Dam Width	Min. 0.15mm	Min. 0.10mm
Thickness Over Trace (Surface)	Min. 10µm	Min. 15µm
Solder Mask Pad Size	Min. 15µm	

### GENERAL

Maximum board thickness	6.00mm	10.00mm
Minimum board thickness	0.30mm	0.20mm
Minimum Track / Gap Inner layer	0.10mm	0.05mm
Minimum Track / Gap Outer layer (35µm)	0.10mm	0.05mm
Finished PCB Thickness	±10%	
Routing Profile	±0.15mm	±0.10mm
V-Cut profile	±0.15mm	±0.10mm





	Standard	Advanced
<b>ELECTRICAL TEST</b>		
% Tested (Open / Short test)	100%	100%
QFP Pitch	16mil (0.40mm)	12mil (0.30mm)
BGA Pitch	16mil (0.40mm)	12mil (0.30mm)
Connector Pitch	16mil (0.40mm)	12mil (0.30mm)

<b>OTHER OPTIONS</b>		
AOI	All Multilayer	All Multilayer
Impedance Control	± 10%	± 5%
Solderability Testing	As standard	As standard
Ionic Contamination	On Request	On Request
Microsection reports	On Request	On Request
Hi-Pot testing	On Request	On Request

**ADVANCED TECHNOLOGIES**  
Blind Vias, Buried Vias, Sequential Lamination, Flex-Rigid Multilayers, Copper Coin Inserts, Ceramic Inserts, Direct Thermal Exchange (DTE), Heavy Copper

**SPECIAL REQUIREMENTS**  
Plated Slots, Edge Plating, Countersinking, Edge Beveling, Jump Scoring, Barcoding, Back Drilling, Castellated Holes, others available on request.

<b>LEAD TIMES: UK MANUFACTURE</b>		
Board Type	Standard	Quick Turn
Single Sided	10 Days	3 Days
PTH	10 Days	5 Days
Multilayer	From 10 Days	From 3 Days

<b>LEAD TIMES: FAR EAST MANUFACTURE</b>	
Board Type	Manufacturing Lead Time
Quick Turn ≤ 5sqft	From 5 Days
Single Sided	10 – 20 Days dependant on volume
PTH	15 – 25 Days dependant on volume
Multilayer	15 – 30 Days dependant on volume & Technology

Air Freight Lead Time – 4 Days

Sea Freight Lead Time – 20 Days

All Far East lead times are subject to customs clearance

Premium International shipments can be arranged by DHL, Fedex, UPS or TNT at extra cost

