EQUIPMENT

UCAM and Genesis engineering software	ORC solder mask Exposure units
EIE Laser plotter	Adam Pill Horizontal solder mask develop line
Wide laser plotter	Microcraft Ink Jet printer
Over 250 different cores held in stock	In house screen making facility
Schmid and Hakuto Automatic Cut sheet laminators	DEK printer for conductive polymer application
3 ORC track exposure units	Fabtech Horizontal immersion silver line
2 FSL develop, etch and strip lines	Automatic Vertical ENIG line
2 Camtek AOI machines	Horizontal OSP line
Optical inner layer punching	Leaded and Lead free HASL
Prepeg Temperature and Humidity controlled storage	2 Custom built Lenz routers for processing Metal boards
Buerkle 5 daylight vacuum bonding presses linked to a buerkle cooling press	6 Lenz FR4 LGX rout machines
	Lohr and Hermann scoring machines
10 Lenz LGX high speed drilling machines	Telmec scoring machines
Fabtech desmear lines	Mania Tower fixtured electrical test machines
Saffron Horizontal direct metallisation line	13 off Speedy flying probe test machines
PAL Vertical automated Electrolytic Copper and Tin plate line	3 ATG Horizontal HD flying probe test machines
FSL Horizontal Outer layer strip, etch , strip line	High Magnification Optical inspection
Circuit Automation DP10 Vertical solder mask application	Impedance measurement
Argon Horizontal solder mask application machines	Horizontal X,Y,Z measuring
Horizontal Electrostatic spray, solder resist line	Micosectioning
Horizontal and Vertical IR solder mask curing	Vacuum packing

CAPABILITIES

ANYTHING IS POSSIBLE

LOGISTICS

LEAD TIMES: UK MANUFACTURE

Board Type	Standard	Quick Turn
Single Sided	10 Days	48 Hrs
PTH	10 Days	48 Hrs
Multilayer	From 10 Days	From 3 Days

LEAD TIMES: EUROPE & FAR EAST MANUFACTURE

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

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gspk CIRCUITS

CAPABILITIES

	Standard	Advanced
CIRCUIT / PANEL SIZE		
Single Sided	Max. 510 x 610mm	
Double Sided Non PTH	Max. 510 x 610mm	
PTH	Max. 457 x 660mm	Max. 610 x 1000mm
Multilayer	Max. 457 x 660mm	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,	Nelco, Rogers, Panasonic, Taconic, Ventec, EMC,
	Grace, Isola, Ventec, EMC	others available on request
Aluminium	Denka, Bergquist, Laird	Denka, Bergquist, Laird
Pre-pregs	1080, 2113, 2116, 2125, 7628	1080, 2113, 2116, 2125, 7628
Other Materials	Please Enquire	Please Enquire
COPPER FOIL		
Single Sided	1oz (35µm) – 2oz (70µm)	30oz (Thirty)(1050µm)
PTH	1oz (35µm) – 30oz (1050um)	30oz (1050µm)
Multilayer (Outer layers)	1oz (35µm) – 6oz (210µm)	6oz (210µm)
Multilayer (Inner Layers)	1/2oz (18µm) – 6oz (210µm)	4oz (140µm)
Metal Clad PCB	1oz (35µm) – 6oz (210µm)	12oz (420µm)
ASPECT RATIO	10:01	16:01
SURFACE FINISHES		
Hot Air Solder Level	Yes	Yes
Lead Free Hot Air Solder Level	Yes	Yes
ENEPIG	Yes	Yes
Immersion Gold (ENIG)	Yes	Yes
Immersion Silver	Yes	Yes
Immersion Tin	Yes	Yes
Hard Gold & Gold Finger	Yes	Yes
OSP	Yes	Yes
SOLDER MASKS, IDENTS AND CARBON		
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	0.15mm
Min. Finished Hole Size (Laser)	0.10mm	0.05mm
Minimum Punched Hole Size	0.80mm	0.70mm

	Standard	Advanced
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%
SOLDER MASK		
Via Plugging (100% Fill)	–20%	-10%
Via 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
ELECTRICAL TEST		
% 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)
OTHER OPTIONS		
AOI	All Multilayer	All Multilayer
Impedance Control	± 10%	± 5%
Solderability Testing	As standard	As standard
Ionic Contamination	On Request	On Request
Micro section and Micro section report	On Request	On Request
XRAY and XRF	On Request	On Request

SPECIAL REQUIREMENTS

PLATED SLOTS – EDGE PLATING – COUNTERSINKING – EDGE BEVELLING – JUMP SCORING – BARCODING

OTHERS AVAILABLE ON REQUEST - COUNTERBORING - DEPTH ROUTING - DEPTH DRILLED VIAS BLIND AND BURIED

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