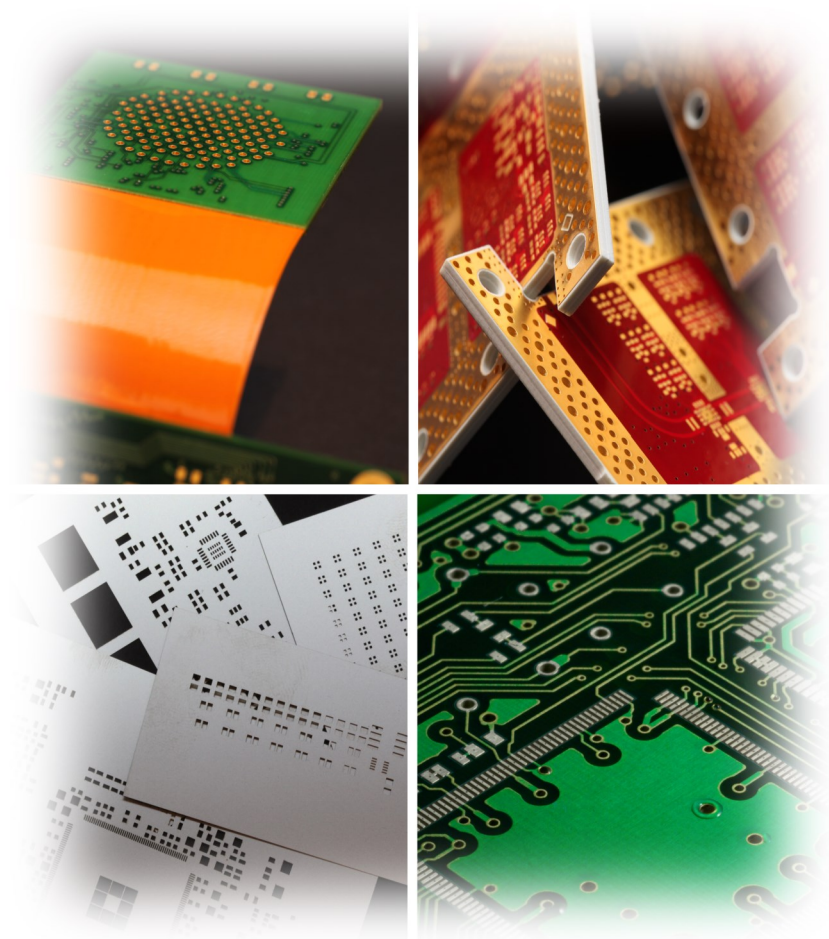


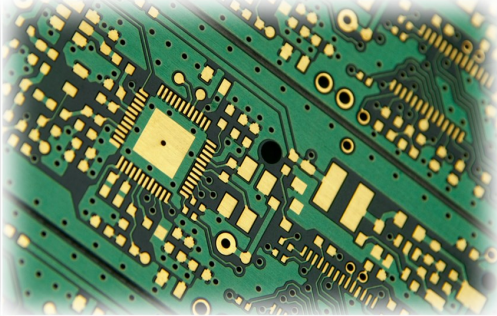
Prago Board

PRINTED CIRCUIT BOARDS PRODUCTION



www.PCB.cz

RIGID BOARDS

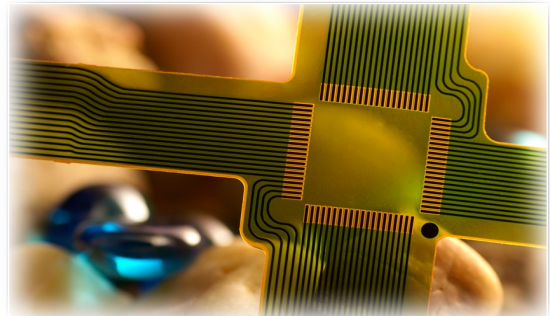


1–14+ HDI Multilayer Boards with blind and buried Vias
Copper ViaFill, Plugged Vias, Capped Vias, Overplated Vias
High Frequency Boards
High Tg Boards
IMS PCBs, Cu core PCBs
Prototype POOL Service Production - 1 Day Express Service

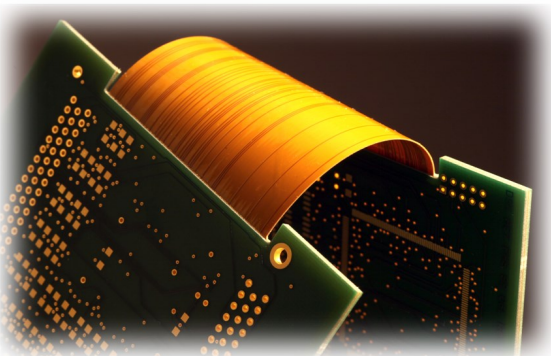
PRODUCTS :

1, 2 and Multilayer Flexible Circuits
Adhesiveless PYRALUX material , EPOFLEX
25, 50, 75, 100 and 125 μm KAPTON
18, 35 and 70 μm Cu thickness
13, 25, 50 μm Coverlay
Green, Amber, White and Black Flexible Soldermask
Laminated or Glued Stiffeners

FLEXIBLE BOARDS



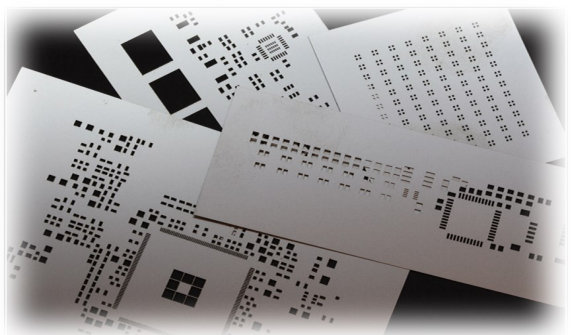
FLEX—RIGID BOARDS



Flex—Rigid Boards
Symetrical and Un-symetrical Build-up
Flying Tails

LASER CUTTED STENCILS

Stainless Stencils 1,4304 with Hardness 370HV
80–250 μm Material Thickness
Prototype Stencils — POOL service
8 hour Express Service



PragoBoard s.r.o.

HDI, Multilayer, Doublesided and Singlesided

PCB Production

Stainless Steel Laser Cutted Stencils

Phone : +420 222 590 402

Fax : +420 222 724 032

E-mail : pcb@pragoboard.cz

Web : www.pcb.cz

Technologický park Bechovice

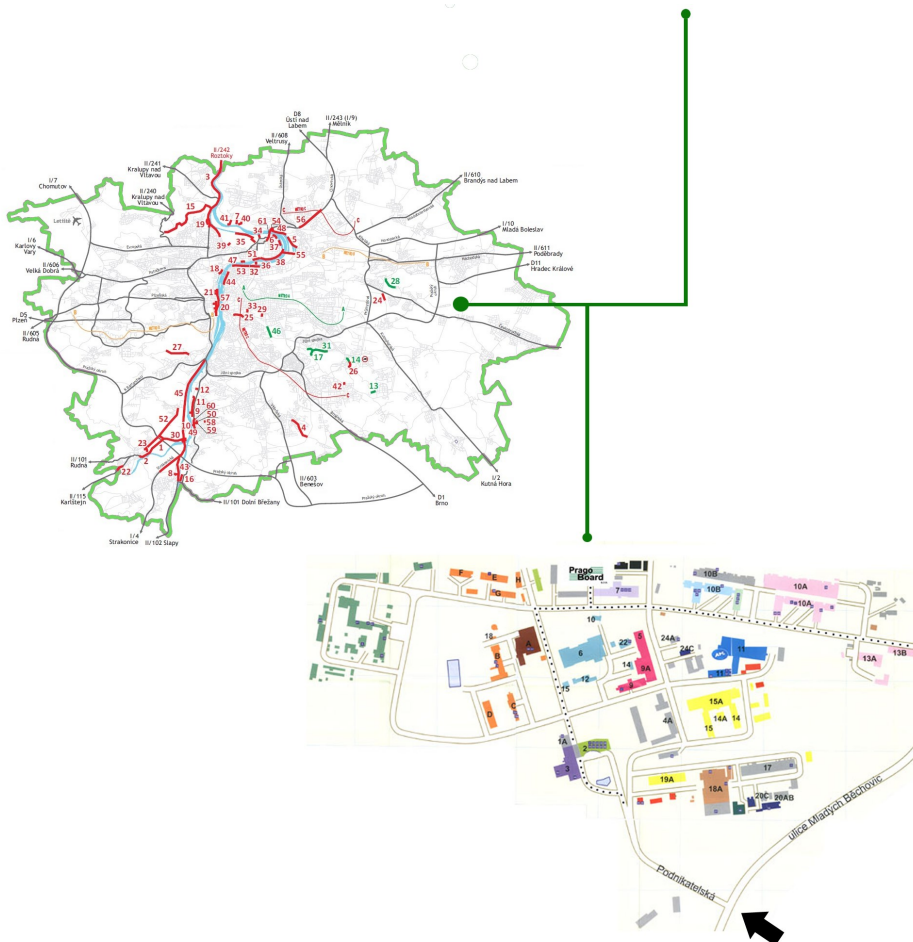
Podnikatelska street

190 11, Prague 9

Czech Republic

Production site Bechovice

GPS : 50°5'34.48"N, 14°36'43.86"E



entry Podnikatelska



TECHNOLOGICAL EQUIPMENT USED :

ARTWORK and DATA PREPARATION :

RP208-NT (8000Dpi) photoplotter | First EIE Switzerland |
CAM350 and GENESIS stations



DRILLING and ROUTING :

Modul DH250 CCD, fully automated CNC Driller with Loader
and CCD Camera for Innerlayer Registration | Schmoll, Germany |
DLG 550-2AL , RLG 460-2AL | LENZ Germany |



V-SCORING :

RM650, semiautomated V-Scorer | HML GmbH Germany |

PATTERN and SOLDERMASK EXPOSURE :

Digital Direct Imaging APOLLON DI-A11-3
Automated Registration and Pattern size compensation,
LED Light Source 375 and 390nm, Full Material Handling
Automation, 35µm T/G Resolution | Printprocess AG |
2x AT 30 8 kW, 4 camera automatic alignment | Olec USA |



THROUGH HOLE PLATING :

Automated Vertical Line with Electroless Copper
Plating - Printoganth PV-E- | PPT, SK |
Horizontal Line with Carbon Colloid Process Shadow | Lumiplas, Spain |



DRY FILM DEVELOPER :

Fully automatic dry film developer | SCHMID Germany |

SOLDERMASK APPLICATION :

DP1500 Doublesided Screenprinter | Circuit Automation USA |



ELECTRICAL TESTING :

A5 + A3 flying probe tester | ATG Germany |

OPTICAL TESTING :

Discovery 8000, Automated AOI Tester | Orbotech Israel |

CONTROLLED IMPEDANCE :

CITS 880 Accurate Impedance Measurement | POLAR Instruments |

DESMEARING and SPECIAL MATERIALS ACTIVATION :

2x Plasma Oven 3017-E | Tepla GmbH Germany |



ETCHING :

PremiumLine - fully automatic etching line | SCHMID Germany |

LASER DRILLING and ROUTING :

LaserFlex1, UV laser driller and router with CCD | Schmoll GmbH |

ML PRESSING :

HML LP100-2-VK, 400°C hot & cold press | HML Germany |



ABOUT THE COMPANY :

Company **PragoBoard s.r.o.** was established in the year 1997. Our main activity is manufacturing of Printed Circuit Boards. In addition, we produce laser cutted stencils for SMT assembly. Production ranks among medium-sized manufacturers in the country. Since its inception, we are focused on product quality and production speed. On the basis of highly qualified processing of input data we can produce PCBs for professional customers as well as for novice designers. We cooperate with a number of universities and other schools with electrical focus, allowing students to experience the pitfalls of the PCBs and become familiar with the technology of its production. The company constantly invests big financial resources into the latest manufacturing technologies. These investments significantly increased the quality and complexity of the products offered. Technological equipment belongs to the global top and allows us to promote even for very demanding foreign markets.

CAPABILITY LIST :

PARAMETER	STANDARD PRODUCTION	POSSIBLE ON REQUEST
Products	HDI ML PCBs, Flex PCBs, FLEX-RIGID, Laser Cutted SMT Stencils	
Input Data Formats	Gerber, Excellon, Sieb&Mayer, ODB++	DXF, HPGL, IPC2581
Basic Material	FR4, Rogers RO4350B, IS400, IS410, P96 rigid polyimide, Pyralux Flexible Polyimide, IMS	Rogers RO3003, Teflon, PCL370HR, IS620 ...
No. of Conductive Layers RIGID	1 - 14	14 and more
No. of Conductive Layers FLEX	4	6 and more
RIGID FR4 Laminate Thickness in Stock	Min. : 0,05 mm / Max. : 3,20 mm	
FLEXIBLE Material Thickness	25µm, 50µm, 75µ,100µ,125µm	Others
Cu Foil Thickness	9µm, 18µm, 35µm, 70µm, 105µm, 140µm	210µm and 400µm
Min. Production Panel	160x290mm	150x200mm
Maximum PCB Size	400x520mm	460x610mm
Minimum PCB Thickness	2-L - 0,1mm	2-L - 0,07mm
	4-L ML - 0,3mm	4-L ML - 0,24mm
	6-L ML - 0,5mm	6-L ML - 0,38mm
	8-L ML - 0,7mm	8-L ML - 0,52mm
Max. PCB Thickness	3,2mm	4mm
Min. T/G/Annular Ring	0,10mm / 0,10mm	0,06mm / 0,06mm
Minimum drilled Hole	0,25mm	0,1mm
Maximum drilled Hole	6,4mm	Over 6,4mm routed
Blind and Buried Vias	Yes, lasered and mechanically drilled, Blind 1:1 / Buried Vias Plugged	
Plated Slots	1,0mm and bigger, Controlled Depth	0,6mm - 1,0mm / Half cutted pla-
Smallest Routing Tool	1,0mm	0,6mm - 1,0mm
Routing Tolerance	0,1mm	< 0,1mm
V-Scoring	Material 0,5 - 3,2mm, min.0,15mm Core	JUMP V-scoring possible
V-Scoring Positioning	0,2mm	0,1mm
Photoimageable Soldermask	Green	Blue, Red, Yellow, White, Bright White, Black, High Temperature Resistant
Soldermask for FPC	Photoimageable Green, white or Amber, Coverlay	Photoimageable Black
Peelable Mask	Yes, Blue	
Marking Print	White	Blue, Red, Yellow, White, Black
Min. Marking Print Line Size	0,12mm	0,1mm
Conductive Carbon Paste	Yes	
Surface Protection Processes	H.A.S.L. (LF and Sn/Pb)	10-20µm
	ENIG	4µm Ni / 0,09µm
	Immersion Tin	1 - 1,2µm
	Galvanic Au Up to the size 100x300mm	5µm Ni / 1µm Au
Testing	100% E-test Flying Probe, Optical AOI, X-Ray ML Check	
Production Times	Standard : 8 Working Days	
	Express : 1 - 7 WD for 2S Express : 2 - 7 WD for 4L Express : 3 - 7 WD for 6L+	8 hours for 2S 24 hours for 4L 48 hours for 6L