



Micro Systems Technologies

HDI & Ultra-HDI Multilayer Rigid

HIGHLIGHTS

- High-reliability interconnect
- Cu or epoxy filled plated through holes
- Thermal management features
- Metal-core PCBs



DYCONEX

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HDI & Ultra-HDI Multilayer Rigid

Rigid Circuit Boards

Description	Production capability
Lines/spaces	35/40 µm
Microvias/pads (laser) Ø	75/200 µm
Through vias/pads (mechanical) Ø	125/250 µm
Thinnest starting material	50 µm
Thinnest dielectric thickness	60 µm
Conductor width tolerance	+/- 20%
Artwork to soldermask tolerance	+/- 25 µm
Layer count	20+

Description	Leading edge capability
Lines/spaces	20/35 µm
Microvias/pads (laser) Ø	50/150 µm
Through vias/pads (mechanical) Ø	100/200 µm
Thinnest starting material	30 µm
Thinnest dielectric thickness	30 µm
Conductor width tolerance	+/- 10%
Artwork to soldermask tolerance	+/- 15 µm
Layer count	up to 24

Technical Data

Over the past decade, the selection of tools available for the manufacture of high density rigid printed circuit boards (PCBs) has been greatly enhanced. The introduction of ultrahigh speed mechanical drilling systems, improved laser technologies and x-ray based/SPC-supportable registration tools has bolstered the capabilities of leading PCB manufacturers around the world. Combined with exciting new material selections, powerful interconnect solutions are now realizable in the rigid board space that up to now were distinctly the territory of flex circuit or non-PCB based technologies.

True to its long-standing tradition of providing state-of-the-art PCB solutions to the electronics industry, DYCONEX has taken great care to keep step with the latest technology developments, and has fruitfully invested in its manufacturing processes, material evaluation activities and engineering know-how. Supplemented by the continuing development and optimization of existing technologies, DYCONEX can offer leading edge solutions for rigid PCBs that make use of latest technologies, all the while maintaining its trademark of product quality excellence, consistency and high reliability.

Technological Highlights

- High reliability in numerous applications from implantable medical devices to MIL and space applications
- DYCOstrate® build-up with buried, blind, staggered and stacked vias
- Thermal management solutions including exotic carbon or invar based heat dissipation materials, heat-sinks, thermal vias and more
- High frequency rigid multilayer circuit boards in combination with LCP as well as other glass reinforced materials
- Ultra-thin base materials
- Low CTE materials
- Vibration resistant metal core boards
- Tight line width tolerances for signal integrity
- A wide variety of surface finishes such as ENIG, ENEPIG, HASL, OSP, immersion Sn, immersion Ag, electroplated Ni/Au

Based in Switzerland, DYCONEX has been in the PCB business for more than 50 years and delivers leading edge interconnect solutions in flex, rigid-flex and rigid technology. DYCONEX core competence lies in the production of highly complex HDI, high-frequency and high-reliability circuit boards for medical, defense, aerospace, industrial and semiconductor applications. DYCONEX is an MST company.



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