



Rigid-Flex

Rigid-flex is a complicated product that demands a lot of interaction between the PCB provider and the customers. Like other complex products, early discussions between NCAB Group and the designer is necessary to optimize the design for manufacturability and to optimize costs. NCAB Group supports rigid-flex boards both locally in Europe and US as well as off-shore for higher volume requirements.

RIGID-FLEX PCBs – TECHNICAL SPECIFICATION

FEATURE	NCAB'S TECHNICAL SPECIFICATION
Number of layers	4-16L
Technology highlights	Mixed materials including RF and high speed, standard FR-4, polyimide flex. Adhesiveless or adhesive based polyimide flex constructions, with cover coat or flexible solder mask materials.
Bending performance	Based on the specific design, the bend performance can range from a basic 90 °bend to fit to a full dynamic flex with 360° range of motion in the flex tail that will withstand continuous cycles throughout the product life.
Bend features	Bend radius controls the flexibility of the flex portion of the board. The thinner the material the lower the bend radius and the more flexible the flex section.
Materials	RA copper, THE copper, FR-4, polyimide, adhesive
Copper weights (finished)	½ ounce, 1 ounce, 2 ounce, 3 ounce
Minimum track and gap	Based on copper weight, ½ ounce copper has 3.5 mil U/S capabilities
PCB thickness	0.4mm to 3mm
PCB thickness in flex section	0.05mm to 0.8mm
Maximum dimensions	457mm to 610mm
Surface finishes available	ENIG, IAg, ISn, OSP
Minimum mechanical drill	0.21mm drilled (0.15mm finished)