



RIGID VS. FLEX & RIGID FLEX

THE ADVANTAGES OF FLEX AND RIGID FLEX PCB'S

Flex and Rigid Flex PCB's hold many advantages over a rigid board. Flex and Rigid Flex Boards provide many new design opportunities and are durable enough to be used in the harshest environments. For this reason, flex and rigid flex pcb's are mainly used for military and aerospace applications.

	<u>RIGID PCB</u>	<u>FLEX & RIGID FLEX PCB</u>
Replaces traditional hardwiring	✓	✓
Design freedom	✗	✓
Weight reduction	✗	✓
3D space savings	✗	✓
Increased reliability	✗	✓
Folding capabilities	✗	✓
Improved durability	✗	✓
Thermal stability	✗	✓
Flexibility	✗	✓
Shock impact reduction	✗	✓

THE FLEX ADVANTAGE

Pioneer Circuits is the worldwide leader in manufacturing flex and rigid flex printed circuits. Flex and rigid flex parts are more reliable, more durable, save more space, reduce more weight, and provide better overall performance for end use applications.



REPLACES HARDWIRING

Printed wiring boards replace hardwiring with a compact, stable platform that remains consistent from application to application.



FOLDING CAPABILITIES

Flex and rigid flex circuits can be folded, bent and creased to fit into the smallest of areas.



DESIGN FREEDOM

Flex and rigid flex circuit boards are designed to fit your application so you don't have to design your application to fit your board.



IMPROVED DURABILITY

Flex and rigid flex pcbs can be built with special materials and shielding which gives them the durability to withstand harsh environments.



WEIGHT REDUCTION

Utilizing flex and rigid flex circuit boards can provide substantial weight reductions of over 50%.



THERMAL STABILITY

Flex and rigid flex pcbs are made with polyimide which has exceptional thermal stability.



3D SPACE SAVINGS

Space requirements can be minimized with the 3D space saving opportunities of flex and rigid flex circuit boards.



FLEXIBILITY

As the name suggests, flex and rigid flex pcbs offer flexibility not only physically, but functionally as well.



INCREASED RELIABILITY

Flex and rigid flex circuit boards eliminate interface connections that may be potential points of failure, increasing part reliability.



SHOCK IMPACT REDUCTION

Because of the lower mass of flex and rigid flex pcbs, there is a reduced impact from shock and vibration that improves their performance.