Rigid flex circuits combine rigid FR-4 areas for dense component population interconnected with flexible polyimide areas which can be bent to accommodate overall packaging needs.

Laser cutting can eliminate the time and cost of tooling during prototyping. It can also be an effective way to cut out unique shapes within a flex circuit.

Shielded flex circuits reduce noise and control impedance of signal lines. Shielding can be solid, patterned or cross hatched and can be on one or both sides.
Flexible Circuit Technologies knows how difficult it can be to find a supplier that is experienced in a wide variety of industries and flexible enough to take on any technical challenge. What makes FCT different? On the front end, our engineers have a wealth of experience in unique applications and a desire to solve problems that others will not. We have domestic and international production capabilities to bring design to reality, and if necessary we can add a dedicated manufacturing line to meet your unique product needs. Finally, with our inventory stocking program, your products can be built in quantities required to effectively meet your business objectives, while being delivered in quantities and time frames desired by your production facility. Like our motto says “We Go Where Others Will Not!”

Single, double, multilayer flex circuits, as well as rigid flex circuits, can be designed with dozens of different conductors, adhesives, insulation layers, finishes, connectors and more. The combinations are nearly endless and are limited only by the designer’s imagination. Please ask for our design guide or visit our website to see more technical information and ideas.

www.FlexibleCircuit.com
Sales@FlexibleCircuit.com
Phone: 763-545-3333 | Fax: 763-545-4444

Pre-formed circuits reduce subsequent assembly time and errors.

Crimp pins are mechanically attached to a circuit to allow for soldered connections.

Over molding embeds electronics on the circuit and provides a more finished appearance.

Fine lines and spaces down to 1 mil each.

Windowed Leads are unsupported conductors running across a window and allow for tight pitch for mass terminations.

 Unsupported leads are conductors extending from the edge of a flex circuit allowing for direct solder connection to mate.

Conformal coating can be added over surface mount components to protect components and increase durability of circuit.

ZIF (Zero Insertion Force) connection allows a flex circuit to be inserted into a circuit board mounted connector with a mechanical actuator that locks the flex in place. A stiffener is applied underneath the exposed traces for additional support.

Fine lines and spaces down to 1 mil each.

Windowed Leads are unsupported conductors running across a window and allow for tight pitch for mass terminations.

Over molding embeds electronics on the circuit and provides a more finished appearance.

Crimp pins are mechanically attached to a circuit to allow for soldered connections.

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WHY USE FLEX? AREN'T THEY ALWAYS THE MOST EXPENSIVE OPTION?

In a word, NO. When you consider the total cost of getting the job done, flex circuits many times are the most reliable and best choice. Here’s are just a few reasons why:

<table>
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<tr>
<th>BENEFITS OF FLEX</th>
<th>HOW?</th>
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<tbody>
<tr>
<td>Decrease in weight &amp; size</td>
<td>Flex circuits contain the thinnest dielectric substrates available. Thinner for a more streamlined design, eliminating the need for bulky rigid boards.</td>
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<tr>
<td>Reduce wiring errors</td>
<td>Eliminate harnesses and hand-made connections.</td>
</tr>
<tr>
<td>Decrease in assembly time &amp; cost</td>
<td>Conductors are photo-defined. More choices for automating assembly of all components. Eliminate routing, wrapping and soldering wires.</td>
</tr>
<tr>
<td>Flexible design freedom</td>
<td>Virtually unlimited. Flex circuits allow a third dimension to your work because they can interconnect between two or more planes during execution. They solve space and weight problems unmatched by rigid boards. Flex circuits can be manipulated many times during installation and execution without electronic failure.</td>
</tr>
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<td>High density applications</td>
<td>Denser populations let you add features or shrink the package to take up a fraction of the space other interconnects require.</td>
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<td>Increase in reliability</td>
<td>Most circuit failures occur at an interconnection point. Flex circuits can reduce the number of interconnections to increase reliability.</td>
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<td>Lower overall costs</td>
<td>Factor in all your soft and hard costs. Flex will surprise you!</td>
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</table>

- **Benefits of Flex**
  - Decrease in weight & size
  - Reduce wiring errors
  - Decrease in assembly time & cost
  - Flexible design freedom
  - High density applications
  - Increase in reliability
  - Lower overall costs

- **How?**
  - Flex circuits contain the thinnest dielectric substrates available. Thinner for a more streamlined design, eliminating the need for bulky rigid boards.
  - Eliminate harnesses and hand-made connections.
  - Conductors are photo-defined. More choices for automating assembly of all components. Eliminate routing, wrapping and soldering wires.
  - Virtually unlimited. Flex circuits allow a third dimension to your work because they can interconnect between two or more planes during execution. They solve space and weight problems unmatched by rigid boards. Flex circuits can be manipulated many times during installation and execution without electronic failure.
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  - Most circuit failures occur at an interconnection point. Flex circuits can reduce the number of interconnections to increase reliability.
  - Factor in all your soft and hard costs. Flex will surprise you!
Choosing the best materials for your project using the best global sources.

Let us globally source the best materials for you at the best price. Here’s a sampling of our material choices:

- **Conductors:** copper, cupro-nickel, inconel, constantan, silver ink, carbon, and aluminum
- **Adhesives:** epoxy, acrylic, pre-preg, PSA, and adhesive-less
- **Insulators:** polyimide, polyester, PEN, PET, solder mask, and PIC
- **Finishes:** ENIG, ENEPIG, hard nickel/gold, immersion tin; organic (OSP), tin plate, and HASL

Remember, as with our design services, “We Go Where Others Will Not” with our materials as well. Refer to our Design Guide or our website for more technical information and options for all materials.

**Services that also demonstrate we will go where others will not!**

It’s not just our design and manufacturing capacity that makes us different; our technical, engineering, procurement and customer services give us a competitive advantage.

- **Engineering and design support**—Applications and design engineering staff with years of experience in flexible circuitry.
- **Domestic and international production capabilities**—Three manufacturing facilities in Asia and USA.
- **Value Added Assembly**—Reduce your vendor count, production delays and quality issues by having us do your sourcing, assembly and testing. From a single component to complex box build, we can handle your needs.
- **Inventory Stocking**—Pull and push inventory to meet your needs. Order in high volume but let us manage your inventories with JIT deliveries.
- **Prototypes, high or low volume**—Many manufacturers have minimum custom orders. We don’t. Order one to a million.

ISO 9001:2008, ISO 14001:2004, ISO 13485, TS 16949, RoHS Compliant, ITAR Registered, UL Registered, FDA Registered, IPC Member, BBB Member

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