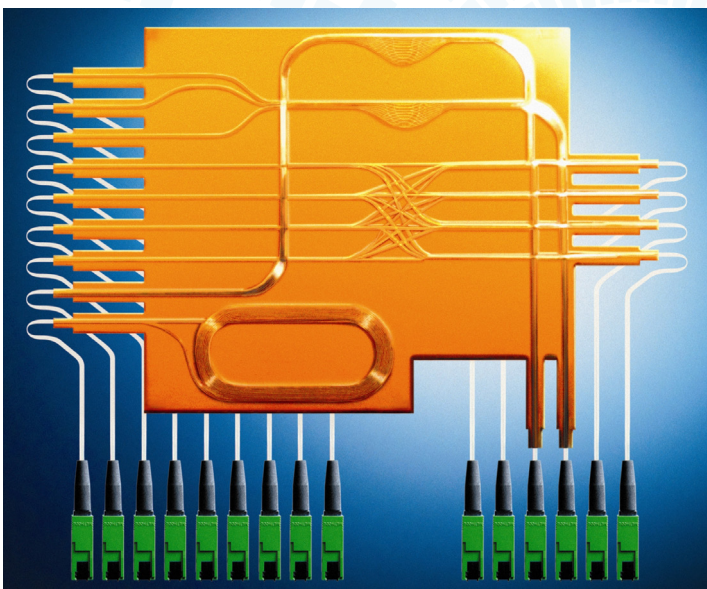


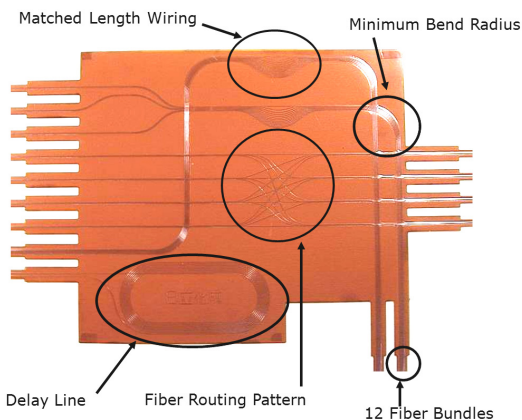
**STRATOS**  
optical technologies

# Optical Fiber Flex Designs



**cinch**  
CONNECTIVITY SOLUTIONS

a bel group



## Routed Fiber Solutions

The Cinch Connectivity Solutions, Stratos Brand Fiber Flex Optical Circuits provide superior solutions for fiber routing and fiber management for PCB card level or backplane applications. Typical features include routed netlist with controlled bend radius, cross connect, shuffle, delay lines, or matched (low skew) lines.

The Optical Flex circuit is created from custom design files and parameters to route the fiber in a compact and efficient manner. The use of rugged materials such as Kapton, Fluorosilicone, PEEK, FEP, and adhesives provide reliable protection to the optical fiber, satisfying the rugged demands of Mil-Aero and rugged Industrial applications.

Supported fiber types include singlemode, multimode, or specialty fiber such as Rad-Hard or Bend-Insensitive. Circuit designs may be as simple as a few fibers or as complex as hundreds of fiber nets. Circuit sizes can run from a few millimeter wide routed ribbon fiber to a 20x20 inch circuit. The routed circuit can be easily extended by the addition of an splicing optical harness or fan-out assemblies.

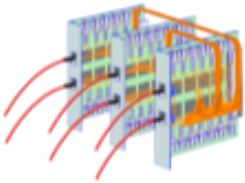
Optical Flex circuits are normally offered with optical termini added. Testing includes net-list checks, insertion loss and return loss, and verification of end face geometries.

# Optical Flex Design Cycle

Optical Fiber Flex circuitry is made possible with Cinch Connectivity Solutions CAD software design tool suite. The CAD design tools allows the designer to create nearly any fiber routing scheme. True 3-dimensional fiber management capabilities help manage fiber micro-bends and macro-bends, playing an important role in the long term reliability of the fiber and reducing attenuation of the signal.

The CAD software feeds into one of several CNC controlled Fiber Beds, where precise placement and routing of the fiber is performed onto the substrate material. The machine process flow of CAD design output driving the CNC Fiber Bed provides constancy and repeatability for additional copies of the fiber circuit.

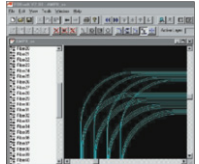
**Concept**



**2D Layout**



**3D Circuit**



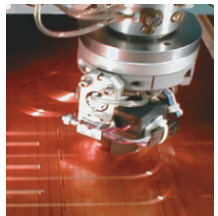
**Concept to Prototypes in 2-3 weeks**



**Finished Circuit**



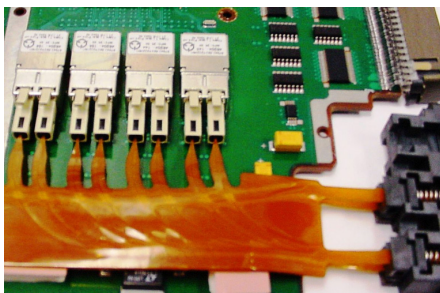
**Fiber Bed**



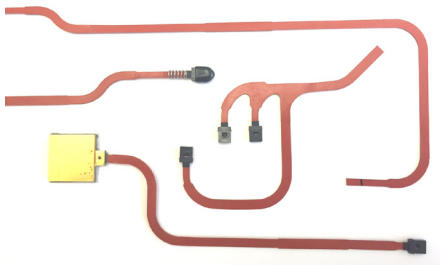
## 20 Year History

Stratos Optical Flex circuits have been around for over 20 years, providing optimized solutions complex fiber optic layouts with extremely high fiber count, providing system designers with real solutions to growing fiber management problems. Developed in the 1990's by Stratos Lightwave (now a part of Bel Fuse Cinch Connectivity Solutions), and improved upon over the last 20 years, these compact circuits have all channels, ports, and fiber routings preconfigured to reduce installation time and simplify system architecture. With few design rule limits to size, shape, or routing complexity, this unique product can greatly improve overall system performance and reliability.

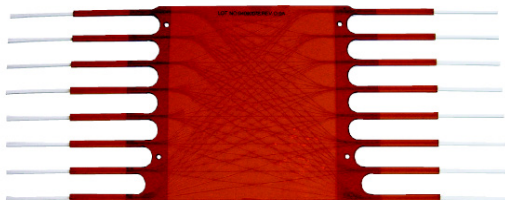
### Mezzanine Circuit



### Routed Ribbon Fiber



### Fiber Cross Connect



# Stratos Optical Technologies

**Stratos** brand of optical connectivity products, designed and manufactured by Cinch Connectivity Solutions, is globally recognized as highly reliable, cost-effective, and provides optical connectivity solutions that are virtually immune to dust, mud, oil, water, and other contaminants.



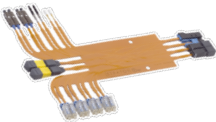
**Optical Transceivers**



**Optical Quad Hybrids**



**Optical Media Converters**



**Optical Fiber Flex Circuits**

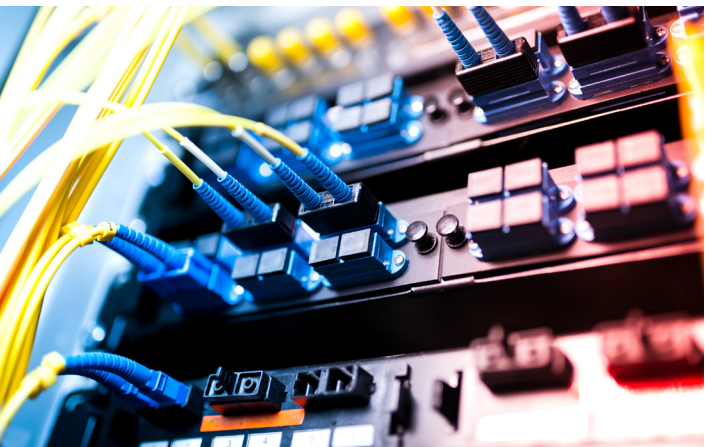
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Viewsonics™

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ELECTRONICS

## About Our Company

Cinch Connectivity Solutions is a vertically integrated supplier of high quality, high performance connectors and cable assemblies. Our product lines deliver custom engineered solutions to satisfy the most demanding and complex requirements. Cinch Connectivity's products support aerospace, military, wireless communications, data networking, telecommunications, test/measurement, broadcast, medical, oil/gas and other harsh environment applications.

For over 100 years, we have aimed to exceed our customers' expectations by continually providing innovative solutions to the rapidly changing needs of the markets and customers we serve.

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