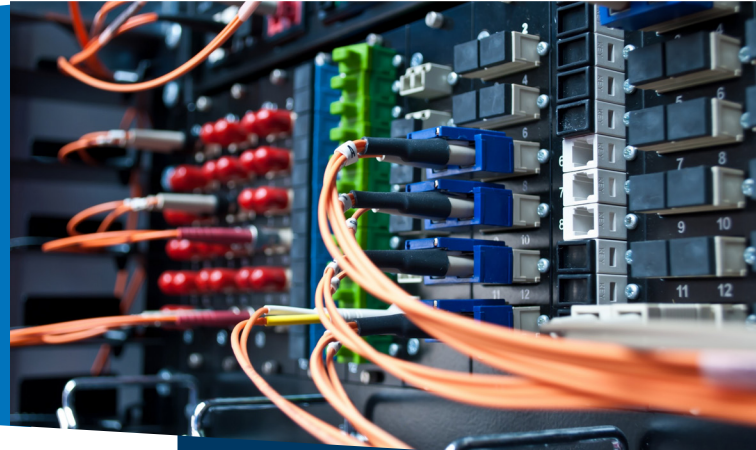


Optical Transceiver Photonic Interconnect



Optoscribe's Fiber Coupled InterconneX (FCX™) is the ideal solution for fiber connection in optical transceivers

FCX™ is a unique glass interface designed to enable simple coupling to arrays of emitters or receivers including VCSELs / PDs or PICs.

The FCX™ revolutionises the footprint and form factor of assemblies, whilst increasing the amount of data transferred across networks.











Easy to integrate into system-in-a-package (SIP) solutions, the FCX™ can be mounted onto PCBs, optical boards or directly bonded as part of hybrid assemblies. The reduced package size simplifies fiber interconnection and liberates design constraints associated with optical I/O.

FCX™ is compatible with a wide variety of standard fiber architectures including SMF and MMF, and also supports advanced space division multiplexed transmission using Multicore Fiber (MCF) or Few Mode Fiber (FMF).

Our products are fabricated using industry standard materials and assembly methods. The excellent matching of the CTE to silicon dies and dimensional stability under thermal load reinforces product reliability. The FCX™ enables robustly packaged systems for straightforward use with minimal disruption.

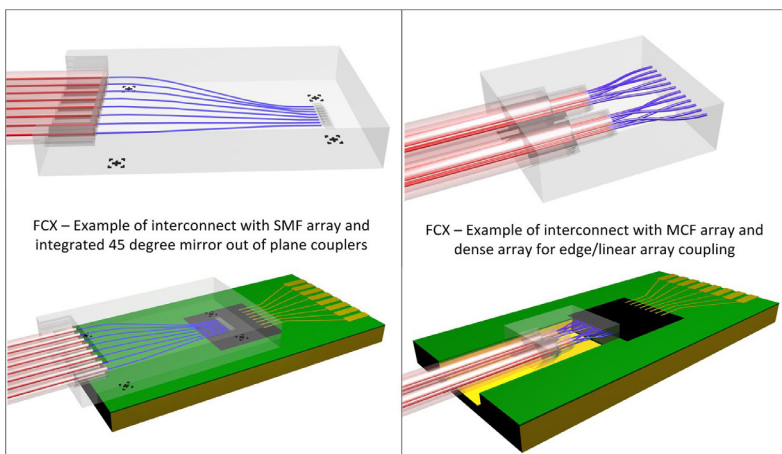
FCX™ provides the following benefits for optical transceiver design and manufacturing:

- Precise alignment between fiber and laser / PD
- Suitable for high volume manufacturing
- Passive alignment
- Excellent thermal expansion properties

-  Easy integration into system-in-a-package architectures
-  Ideal for coupling to arrays of emitters or receivers such as VCSELs, PDs or PICs
-  Increased design freedom in optical I/O and simplified fiber integration
-  Compact and robust interconnection with reduced package footprint
-  Broad flat spectral response with high throughput and minimal insertion losses
-  Supports high data rates for both datacoms and telecoms
-  Low loss interface between fibres / arrays
-  Compatible with many fiber types and architectures including SMF, MMF, FMF, MCF
-  Automated manufacturing process ensures scalability
-  Can be used as an integration platform for glass-based transceivers

FCX™ Specifications

Parameter	Value	Notes
Waveguide Propagation Loss	< 0.2 dB / cm	
Polarisation Dependant Loss	< 0.1 dB / cm	
Spatial Positioning Accuracy	< ± 50 nm	
Operating Wavelengths	800 – 1650 nm	Please contact for more information
Waveguide Types	SM, MM	Dimensions and specifications can be customised - please contact
Fiber Types	SMF, MMF, FMF, MCF	Please contact for more information
Minimum Waveguide Pitch At Facet	20 µm	
Additional Features Available	45 degree Mirrors, Monitor Taps, Embedded V-Grooves	Other high accuracy micromachined features available



Example configurations and use cases

For more information contact us.



Optoscribe Ltd.
 Unit 1, Rosebank Park
 Rosebank Road
 Livingston, West Lothian,
 UK. EH54 7EJ

T: +44 (0) 1506 536000
 F: +44 (0) 1506 691280
 E: sales@optoscribe.com
 W: www.optoscribe.com

