

FIBRESYSTEMS

Optoscribe – 3D photonic integrated circuit platform for optical communications.

Optoscribe's unique 3D glass-based photonic integrated circuit platform is ideally suited for creating custom transceiver fiber coupling and attaching solutions designed to specifically address the challenges of individual optical transceiver architectures and configurations. Designed to enable compact and robust optical interconnects, **Optoscribe's** platform revolutionise the footprint and form factor of assemblies and dramatically increase the amount of data transferred across networks. This in turn minimises network costs whilst maximising cable performance.

We use proven and tested manufacturing processes to enable simple volume scalability, and ensure that our products are designed to meet the stringent needs of communications markets.

Easy to integrate into a wide range of advanced communications applications the 3D nature of **Optoscribe's platform lends itself to address fiber density issues as speed (bandwidth)** moves from 400Gb/s to 800Gb/s and beyond. It also supports advanced space division multiplexed transmission using the latest fibers, more specifically, Single Mode Fibers (SMF), Multimode Fibers (MMF) Multicore Fibers (MCF) and Few Mode Fibers (FMF). The 3D fiber coupling solutions can address challenges in a wide variety of transceivers including Silicon Photonics, VCSEL and DFB based designs and coupling to a range of standard fiber architectures.

Products

Our [Transceiver Photonic Platform](#), [3D OptoFan™ Series](#), [3D OptoLantern™ Photonic Lantern](#) combine multiple components into a single platform to enable high throughput, low insertion loss, and a broad flat spectral response over telecoms bands. This leads to the transmission of high data rates, decreased footprint and reduced assembly costs for both datacoms and telecoms. These products are ideal for [Space Division Multiplexing \(SDM\)](#). **The 3D OptoLantern™ provides a unique** interface between multimode and single Mode technologies, for simple and easy mode division multiplexing using FMF.

Transceiver Photonic Platform

Optoscribe's unique glass-based photonic integrated circuit platform is ideally suited for creating custom fiber coupling and attaching solutions for transceivers used in optical interconnects within and between data centers.

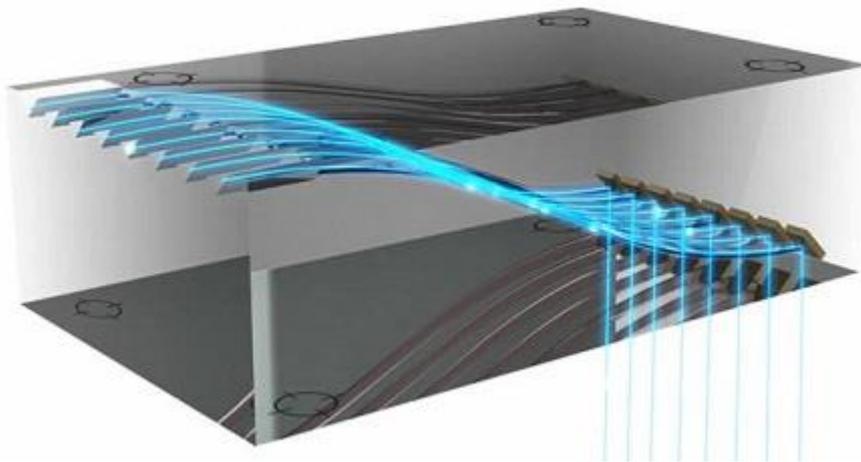
Using 3D direct laser writing technology, the list of available platform components include: single mode waveguides, multimode waveguides, mirrors for 90-degree light turn, V grooves

FIBRESYSTEMS

for accurate passive fiber alignment, fiducial markers for precise alignment to fiber and transceiver platform.

Optoscribe's transceiver photonic platform can address challenges in a wide range of transceivers including SiPh, VCSEL and DFB based designs and coupling to a wide variety of standard fiber architectures including SMF and MMF. The platform also supports advanced SDM transmission using MCF or FMF. Our website enables you to design your own [custom transceiver photonic platform](#) so why not try it and see.

 Example for singlemode VCSEL platform or SiPh with grating couplers



3D OptoFan™ Series

Connecting SMFs to MCFs is made simple using the multicore fiber fanout series of products.

The 3D OptoFan™ **series of products enables users to** address individual cores within multicore fibers and dramatically increase the amount of data that can be transferred. Unlike **more conventional bundled fiber technologies, the 3D OptoFan™ enables high density** transportation of light through 3D waveguides. Optoscribe offers standard 4,7 and 8 core configurations that can be easily customised to suit MCF geometry. Other core configurations – and arbitrary core positions – are also possible.

This is ideal for applications where space is at a premium and high bandwidth connectivity is essential. Applications include space division multiplexing, high density coupling and sensing.

FIBRESYSTEMS

The flexibility to scale our products ensures that we can meet the need for system integrators to increase the amount of data transferred at any given point in time. Our products are robust, reliable and repeatable and the ideal solution for optical communication networks.



3D OptoLantern™ Photonic Lantern

The 3D OptoLantern™ Photonic Lantern series of products are a new class of glass components designed to interface FMFs and SMFs in a monolithic, scalable, compact solution with best-in-class fiber alignment precision.

Our unique technology consists of laser scribed 3D waveguides which act as an interface between FMFs and SMFs. This compact and fully packaged solution easily integrates with existing technology to minimise disruption and maximise performance.

The OptoLantern™ is optimised for OFS fiber and is available in 3 and 6 channel configurations. Other interface geometries are available on request.

Using the OptoLantern™ users can dramatically increase the amount of data transferred across an optical fiber whilst minimising space.

FIBRE SYSTEMS

