



Flexi Circuit Fiber Shuffle for CPO Application

Flexi Circuit Fiber Shuffle provides a dedicated way to manage hundreds to thousands of fibers on the board. The thin film structure optimizes the space and thus enhance the airflow in the dense device. It is stackable to take care of multi-layer design. Optec has self-developed an automated fiber laying machine to increase productivity and stability. This supports production scalability of on-board fiber routing solution for next-gen CPO incorporated device & modules. The schematic diagram below shows how this can be applied on a CPO Ethernet Switch.

US Conec offers comprehensive connector solution for on board optics for direct light coupling, onboard, midboard, board edge and backplane applications. Optec has been honored to cooperate for nearly two decades to offer cable assembly to the market with US Conec's pioneer solutions.



Schematic Diagram

Demo on 51.2Tb CPO Ethernet Switch

Fiber Shuffle with 1152F (1024x SMF +128x PMF) on Thin Film Flexi Circuit Controlled fiber bending radius at minimum or above tolerance Standardized fiber length from COBO/NPO/OE to Mid-Board

Yellow colored line indicates 32x Tx SMF with MXC[®] connector Red colored line indicates 8x ELS PMF Blue colored line indicates 32x Rx SMF with MXC[®] connector MT interface for PMF (Polarization Maintaining Fiber) Mid-board Connector for SMF (Singlemode Fiber) Backplane Adaptor Interface for ELS (External Light Source) Blindmate Connector at ELS MMC[®]-16 – Very Small Form Factor MT Connector

Automated Fiber Laying



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Stackable Thin Film

