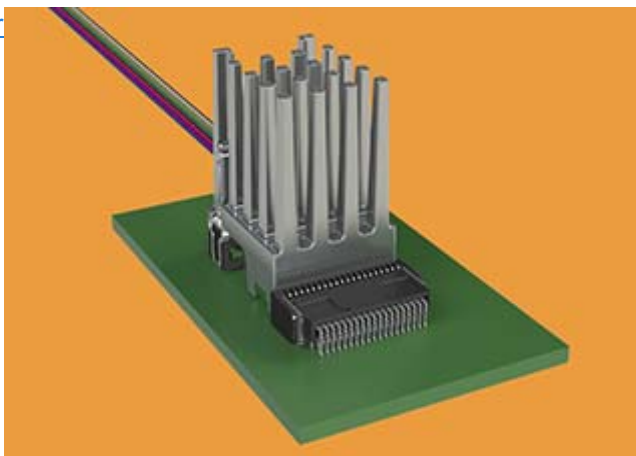




Samtec, Inc. and Pentek Partner to Incorporate FireFly™ Active Optical Flyover System Into VITA 65 Open VPX Standard

Samtec's active optical [Micro Flyover System, FireFly™](#), first unveiled at DesignCon in 2013, was selected by Pentek as the optical backplane solution in their latest product, the Flexor Model 5973 3U VPX FMC carrier with a Virtex-7 FPGA. The Flexor Model 5973 features a high pin-count VITA 57.1 FMC site, Samtec SEARAY™ Open Pin Field Array Connectors, 4 GB of DDR3 SDRAM, PCI Express® (Gen 1, 2 and 3) interface up to x8, optional user-configurable gigabit serial I/O and optional LVDS connections to the FPGA for custom I/O.



Robert Sgandurra, Director of Product Management for Pentek, said, "When we decided to include optical interfaces in our new Flexor family of products, we looked at the offerings from all the usual players in the optical components field. Our boards are a fairly small form factor and very densely populated, so our biggest challenge was fitting a x12 duplex optical engine in a very tiny space. While we use Samtec copper connectors throughout our product lines, we never thought of looking at Samtec for optical, that was until a casual conversation with our Samtec rep. When he showed us FireFly™, it looked like a good fit. After some time consulting with the engineers at Samtec, we knew we had the right solution. We were a little concerned that FireFly™ was still in pre-production at the time we designed in the components, but Samtec delivered first articles on time which allowed to hold to our schedule. Any time we had questions, Samtec engineers were available for technical support and consulting."

The Flexor Model 5973 delivers new levels of I/O performance by incorporating the emerging VITA 66.4 standard for half size MT optical interconnects providing 12 optical duplex lanes to the backplane. With the installation of a serial protocol, the VITA-66.4 interface enables gigabit backplane communications between boards independent of the PCIe® interface. The FireFly™ Micro Flyover System was Pentek's solution of choice to meet the VITA-66.4 specification.

Samtec's FireFly™ is the first future proof interconnect system that gives designers a choice of using either low-cost copper cables or high performance active optical engines to meet today's data rate requirements and the next generation. The system used within the Flexor Model 5973 features one 12 channel Tx FireFly™ module and one 12 channel Rx FireFly™ module joined into a single MT Ferrule with each channel operating at up to 14 Gbps for an aggregate system data rate of 336 Gbps.

In regards to customer adoption of this product, Adam Linderman, SI Product Manager for Samtec said, "We're seeing a lot of traction with some of the major players in high performance computing for simulation and emulation. FireFly™ is simplifying their design process by eliminating board routing challenges of chip-to-chip, board-to-board and system-to-system connectivity at data rates up to 28 Gbps. Pentek's innovative use of FireFly™ to create a flyover, optical backplane has also caused a ripple effect with other customer applications. As adoption increases in the HPC market, we expect to see it catching on with more customers in their servers and storage space. It's a truly robust solution for high data rate demands, and it's been exciting to see how some of our more cutting edge customers are designing it into their systems."

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