20-circuit connectors intended for 25 Gbps data and telecom equipment

The Molex Incorporated enhanced zSFP+ (Small Form-factor Pluggable Plus) SMT (Surface Mount Technology) 20-circuit connectors deliver superior performance in high-speed telecom and data communications equipment. Designed for 25 Gbps serial channels in high-speed Ethernet and Fibre Channel, the new zSFP+ interconnect assemblies are scalable for next-generation applications and provide optimal electromagnetic interference (EMI) and signal integrity (SI) margins in 10 and 16 Gbps channels.

Backward compatible zSFP+ connectors share the same mating interface and EMI cage dimensions as the SFP+ form factor. The zSFP+ connectors feature a preferential coupling design using insert molding and a narrow edge-coupled blanked and formed contact geometry for superior signal, mechanical and electrical performance while greatly reducing resonance compared to current SFP+ products. Components of the new zSFP+ interconnect system include: zSFP+ SMT 20-circuit connectors, stacked integrated connectors and passive optical cable assemblies.

“SFP connectors and stacked integrated connectors have undergone major design enhancements to achieve and optimize next-generation performance,” says Joe Dambach, new product development manager, Molex. “The new zSFP+ SMT technology offers a fully integrated solution to upgrade and design storage, switches, routers and hubs in central office and multi-platform data systems.”

The zSFP+ SMT 20-circuit connector features the same PCB footprint, mating interface and EMI cage dimensions for total backward compatibility as a drop-in replacement for current SFP+ form factor host board designs. The high-temperature thermoplastic housing can withstand lead-free processing. Single-port and 1x

ganged cages support multiple port count applications and options for use with various board thicknesses and assembly processes to accommodate server and switch applications at a cost comparable to SFP+ cages. Ganged cages are available with two, four or six ports for multiple design options.

The stacked integrated connector and cage is available in a press-fit application that eliminates reflow assembly and offers a compact, space saving design with ease-of-processing. An internal vertical shield provides unparalleled EMI reduction performance. Press-fit tails accommodate belly-to-belly applications for single and ganged cages to maximize use of printed circuit board (PCB) space. Optional rear and side-mounted lightpipe cover assemblies allow flexibility of PCB signal routing of LEDs to provide port status and activity feedback to the user.

Molex fiber optic LC duplex cable assemblies with OM3/OM4 fiber are used with zSFP+ optical modules, offering a high-performance interconnect solution with customization options for length and strain relief boots which include straight, 45 and 90 degrees angles. LC duplex jumpers with OM3/OM4 fiber offer the enhanced launch bandwidth needed for this next generation of zSFP+ devices. Molex LC duplex connectors meet the EIA-TIA and FOCIS 10 standards and are compliant with MSA devices.

“Enhanced zSFP+ interconnects provide a superior mating assembly for emerging 25 Gbps designs—and Molex customers are already benefiting by implementing the enhanced zSFP+ solution on their current lower-speed boards to deliver additional signal integrity margin,” adds Dambach.

For information about the zSFP+ SMT 20-circuit interconnect portfolio, please visit www.molex.com/link/zsfp+.html [1]

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