SFP-DD (Double Density) Module and Cage/Connector System, MSA 2.1

SFP-DD (Double Density) Module and Cage/Connector System delivers a 2-lane electrical interface, complementing QSFP-DD top-of-the-rack interfaces, and addresses issues caused by underpopulated lanes in file server interconnects

Features and Advantages

- Backward compatible with all SFP-style interfaces
  Mates with existing SFP+ Cable Assemblies, Modules and AOCs. Same form factor as zSFP+ Connectors, except for depth (SFP+ = 49.00mm deep; SFP-DD = 71.50mm deep). The resulting 22.50mm increase in depth accommodates second row of terminals.

- Focused 2-lane interconnect at the server
  Accommodates higher lane count QSFP-DD top-of-rack (TOR) interface. Takes up less board and panel real estate than do zQSFP Interconnects.

- Temp-Flex cable technology
  Boosts electrical performance. Provides excellent operational margin, short lead times and minimal end-user cost via manufacturing efficiencies.

- Doubles lane density and data speed of SFP transceivers
  Enables future-proof bandwidth upgrades. Delivers up to 25 Gbps NRZ or 56 Gbps PAM-4 (56 Gbps NRZ or 112 Gbps PAM-4 aggregate). Provides an overall doubling of the port density in network applications when used with QSFP-DD switch ports.

- Efficiently supports 4 port breakouts (2 lanes per port) in SFP-DD-to-QSFP-DD Cable Assemblies
  Complements QSFP-DD System capabilities. Delivers 400 Gbps data rates to four 100-Gbps lanes. Supports 200 Gbps to four 50-Gbps lanes, if required.

- Fully integrated design
  Incorporates all components (backshells, cable, populated PCBs) from Molex. Ensures high-quality components are compiled into a comprehensive solution with a superior cost structure.

- 40-circuit SMT connector
  Provides 2 banks of 20 circuits, each backward compatible with SFP.

- Concept leverages QSFP-DD SMT design
  Delivers excellent signal integrity.

- Reduced board real estate and panel beachfront as compared to QSFP-DD form factor
  Delivers compact connectivity.

- Stacked version designs available upon request
  Offers design flexibility.

- Future options will include stacked connectors and cages and belly-to-belly versions
  Will provide a complete high-density solution to complement QSFP-DD Interconnect System.
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Applications

Telecommunications/Networking
- Server
- Storage

Target Specifications

**ELECTRICAL**
- Voltage (max.): 30V AC (RMS)/DC
- Current (max.): 0.5A
- Contact Resistance: Avg 8.38
- Dielectric Withstanding Voltage: 300V AC applied between adjacent contacts for 1 minute

**PHYSICAL**
- Housing: High-Temperature Thermoplastic Glass Filled, UL 94V-0 Black
- Contact: Copper Alloy
- Plating: Contact Area — 0.381 or 0.762µm (15 or 30µ”) Gold
- Solder Tail Area — Tin
- Underplating — Nickel
- PCB Thickness: 1.57mm
- Operating Temperature: -40 to +85°C

**MECHANICAL**
- Insertion Force to PCB: 35N
- Durability (min.): 250 cycles

For more information on the SFP-DD Interconnect MSA, visit [www.sfp-dd.com](http://www.sfp-dd.com)

www.molex.com/link/sfpdd.html

Note: Molex reserves the right to delay or cancel production of the depicted product without additional notice. Please contact your Molex customer service representative for product availability.

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