Storage & Server IO

Amphenol

SAS/PCIe® 6.0 (U.2/SFF8639) Connectors

HIGH SPEED 64GB/S PAM4 DESIGN FOR NEXT-GEN SERVERS AND STORAGE

SAS/PCIe® 6.0 (U.2) connectors come with 64Gb/s PAM4 (PCIe® lanes) and 24Gb/s (SAS lanes) speeds to meet the demands of next-generation servers. The 68-position, SAS/PCIe® receptacle and plug enable implementation of high-speed Serial Attached SCSI (SAS) hard disk drive (HDD) interface as well as Peripheral Component Express (PCIe®)-based devices. The molded guidepost allows the device plug and receptacle to self-align during the mating process. With a halogen-free high-temperature thermoplastic, these connectors are made to withstand diverse conditions. It also offers a durability of 500 mating cycles.

- Compatible with SFF8639 specification
- Capable of meeting 24Gb/s SSDs and HDDs or PCIe® devices at 64Gb/s PAM4
- Footprint backward compatible to U.2 Gen 5/Gen 4 connectors

TARGET MARKETS

FEATURES

BENEFITS

FEATURES	BENEFITS
Receptacles are inter-mateable with unshielded dual port SFF8680 (SAS 3.0/SAS 4.0) connectors	Offers flexibility in component selection
SAS/PCIe® connectors enable SFF8630, SFF8680 and SFF8432 interface	Implementation of high speed SSDs (Solid State Drives) and HDDs (Hard Disk Drives) allows compatibility between unshielded dual and multiport interfaces
Backward compatible with 12Gb/s, 6Gb/s SAS, U.2 Gen4/5 connectors	Same interface can be used for cost-effective storage HDDs as well as higher performance server SSDs
Supports up to 4 port 64Gb/s (PAM4)PCIe® based devices	Improves performance and faster file transfers
Supports both SAS and U.2 NVME drives	Addresses the needs of both mission critical and bulk storage applications
Staggered contact lengths	Provides sequential contact mating for hot plugging
Stamped clips act as connector retainers for robust PCB attachment	Provide additional mechanical strength after soldering
Molded guideposts help mating halves to self-align by providing angled lead-ins	Compensates for connector misalignment

TECHNICAL INFORMATION

MATERIAL

- Contact Base Metal: Copper Alloy
- Contact Area Plating: Gold over Nickel
- Solder Tail Plating: Tin over Nickel
- Retainer Clip Base Metal: Copper Alloy
- Retainer Plating: Tin over Nickel
- Housing: Halogen–free High Temperature Thermoplastic (UL94V–0), Black

ELECTRICAL PERFORMANCE

- Contact Resistance: 30mΩ max. for signal contacts. Per EIA 364–23
- Current Rating: 1.5A min. per contact with temperature rise not exceeding 30°C (power pins only: P1–P15). Per EIA 364–70B
- Insulation Resistance: 1000MΩ min. per EIA 364–21

MECHANICAL PERFORMANCE

- Durability: 500 mating cycles
- Mating Force: 59N max.
- Unmating Force: 6N min.

ENVIRONMENTAL

- Humidity: 96 hours at 40°C with 90–95% relative humidity. Per EIA 364–31, Method II, test condition A
- Temperature Life: 85°C for 500 hours. Per EIA 364–17 test condition III, method A
- Thermal Shock: 10 cycles between –55°C to +85°C. Per EIA 364–32, test condition I
- Mixed Flow Gas: Expose ½ samples unmated for 7 days and then mated for 7 additional days; the other ½ samples are exposed and mated for 14 days. Per EIA 364–65, class II exposed mated for 14 days. Per EIA 364–65, class II A

SPECIFICATIONS

- Amphenol Product Specification: SSAS009–E

PACKAGING

- Tape and Reel
- Tray

TARGET MARKETS/APPLICATIONS

Processor and Storage Blade
Mezzanine Card

HDD
HDD Carrier
External Storage System
Interposer Card
Server
Storage Server
Processor and Storage Blade

Disclaimer
Please note that the above information is subject to change without notice.

PART NUMBERS

SAS/PCIe® 6.0 Receptacle								
Application	Orientation	Termination Type	Retainers	Height (mm)	Mount Type	Impedance	Others	Part Numbers
U.2	Vertical	SMT	SMT	8.15mm	Top mount	85Ω		PSAS6F3130011TR
U.2	Vertical	SMT	TH	8.15mm	Top mount	85Ω		PSAS6F3130021TR

Find part number details using the search box on www.amphenol-cs.com

SAS/PCIe® 6.0 Receptacle								
Application	Orientation	Termination Type	Retainers	Height (mm)	Mount Type	Impedance	Others	Part Numbers
U.2	R/A	SMT	TH	4.9mm	Top Mount	85Ω		PSAS6M2130011TR

Find part number details using the search box on www.amphenol-cs.com

SSIOSASPCIE600125EA4

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