

Serial-Attached SCSI/Peripheral Component Interconnect Express (SAS/PCIe) 3.0

HIGH SPEED DESIGN WITH FLEXIBILITIES

SAS/PCIe 3.0 connectors for next-generation servers with 12Gb/s speeds. The 68-position, SAS/PCIe receptacle and header enables implementation of high speed Serial Attached SCSI (SAS) hard disk drive (HDD) interface as well as Peripheral Component Express (PCIe)-based devices.

- Compatible with SFF8639 specification
- Capable of meeting 12Gb/s SSDs and HDDs or PCIe based devices at 8Gb/s
- Molded guide post allows device plug and receptacle to self-align during mating process
- Footprint backward compatible to 6G and 3G SAS connectors



TARGET MARKETS



FEATURES

- Receptacles are intermateable with unshielded dual port SFF8680 (SAS 3.0) connectors
- SAS/PCIe connectors enable SFF8630, SFF8680 and SFF8432 interface
- Backward compatible with 6Gb/s SAS, SATA and 3Gb/s SFF8482 connectors
- Supports up to 4 ports PCIe based devices
- Supports both SAS and SATA drives
- Staggered contact lengths
- Stamped clips act as connector retainers for robust PCB attachment
- Molded guideposts help mating halves to self-align by providing angled lead-ins

BENEFITS

- Offers flexibility in component selection
- Implementation of high speed SSDs (Solid State Drives) and HDDs (Hard Disk Drives)
- Allows compatibility between unshielded dual and multiport
- Same interface can be used for cost-effective storage HDDs as well as higher performance server SSDs
- Improves performance and faster file transfers
- Addresses the needs of both mission critical and bulk storage applications
- Provides sequential contact mating for hot plugging
- Provide additional mechanical strength after soldering
- Compensates for connector misalignment

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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: 12N 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 mated for 14 days. Per EIA 364-65, class II A exposed mated for 14 days. Per EIA 364-65, class II A

SPECIFICATIONS

- Amphenol Product Specification: GS-12-282 and SSAS009

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

12G SAS/PCIe Receptacle								
Performance	Orientation	Termination Type	Retainers	Locator Post	Height (mm)	Mount Type	Std/Reverse	Others
12Gb/s	Vertical	SMT	SMT	Yes	8.15	Top mount	Standard	–
12Gb/s	Vertical	SMT	DIP	Yes	8.15	Top mount	Standard	–
12Gb/s	Vertical	SMT	Harpoon	Yes	8.15	Top mount	Standard	–
12Gb/s	Vertical	SMT	SMT	Yes	14.15	Top mount	Standard	–
12Gb/s	Vertical	SMT	SMT	Yes	8.15	Top mount	Standard	85ohm
12Gb/s	Right angle	Hybrid	DIP	Yes	1.75	Sink type	Standard	–
12Gb/s	Right angle	SMT	SMT	No	2.85	Top mount	Standard	–
12Gb/s	Right angle	SMT	DIP	Yes	2.85	Top mount	Standard	85ohm
12Gb/s	Right angle	SMT	Harpoon	Yes	2.85	Top mount	Standard	–
12Gb/s	Right angle	SMT	DIP	Yes	2.85	Top mount	Reverse	–
12Gb/s	Right angle	SMT	SMT	Yes	7.07	Top mount	Standard	–

12G SAS/PCIe Header								
Performance	Orientation	Termination Type	Retainers	Locator Post	Height (mm)	Mount Type	Std/Reverse	Others
12Gb/s	Vertical	SMT	SMT	Yes	8.35	Top mount	Standard	–
12Gb/s	Vertical	SMT	SMT	Yes	7.00	Top mount	Standard	–
12Gb/s	Right angle	SMT	SMT	Yes	2.55	Sink type	Standard	–
12Gb/s	Right angle	SMT	SMT	Yes	2.80	Sink type	Standard	–
12Gb/s	Right angle	SMT	SMT	Yes	4.00	Sink type	Standard	–
12Gb/s	Right angle	SMT	SMT	Yes	4.30	Sink type	Standard	–
12Gb/s	Right angle	SMT	Harpoon	No	5.30	Top mount	Standard	–
12Gb/s	Right angle	SMT	–	–	0.45	Straddle mount	Standard	with SIO pin
12Gb/s	Right angle	SMT	–	–	0.08	Straddle mount	Standard	–
12Gb/s	Right angle	SMT	Harpoon	No	4.90	Top mount	Standard	–

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