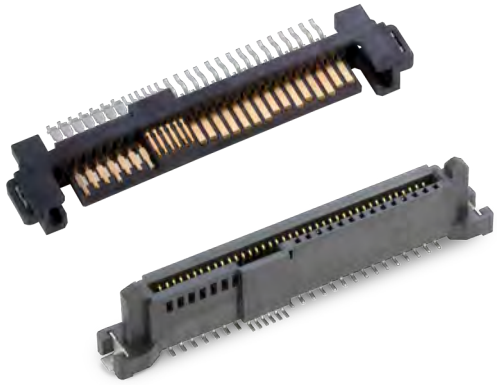
SAS/PCIe® 4.0 (U.2&U.3) Connectors

HIGH SPEED MULTI-PROTOCOL DESIGN WITH FLEXIBILITIES

SAS/PCIe® 4.0 (U.2&U.3) connectors come with 16GT/s (PCIe® lanes) or 24Gb/s (SAS lanes) speeds to meet the demands of next-generation servers. 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. The molded guide post allows device plug and receptacle to self-align during mating process. With 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® based devices at 16GT/s
- Footprint backward compatible to 12G, 6G and 3G SAS connectors



TARGET MARKETS

FEATURES	BENEFITS
Receptacles are inter-mateable with unshielded dual port SFF8680 (SAS 3.0 or SAS 4.0) connectors	Offers flexibility in component selection
SAS/PCIe® connectors enable SFF8630, SFF8680 and SFF8432 interfaces	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, SATA and 3Gb/s SFF8482 connectors	Same interface can be used for cost-effective storage HDDs as well as higher performance server SSDs
Supports up to 4 port 16GT/s PCIe® based devices	Improves performance and faster file transfers
Supports both SAS and SATA 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 mated for 14 days. Per EIA 364-65, class II Aexposed mated for 14 days. Per EIA 364-65, class II A

SPECIFICATIONS

- Amphenol Product Specification: 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

PART NUMBERS

Note: More options are available upon request. Please contact your local sales representative.

SAS/PCIe 4.0 Receptacle								
Application	Orientation	Termination Type	Retainers	Height (mm)	Mount Type	Impedance	Others	Part Numbers
U.2	Vertical	SMT	DIP	8.15	Top mount	92Ω	Wide base	PSAS4F313002XXX
U.2	Vertical	SMT	DIP	8.15	Top mount	92Ω	High dura-bility	PSASF313027XXX
U.2	Right Angle	SMT	DIP	2.85	Top mount	92Ω	Standard	PSAS4F213002XXX
U.2	Right Angle	SMT	DIP	2.85	Top mount	92Ω	Reverse	PSAS4F213001XXX
U.2	Vertical	SMT	SMT	8.15	Top mount	92Ω	–	PSAS4F313004XXX
U.2	Vertical	SMT	DIP	8.15	Top mount	92Ω	–	PSAS4F313012XXX
U.2	Right Angle	Hybrid	DIP	1.75	Top mount	92Ω	–	PSAS4F413001XXX
U.2	Vertical	SMT	Fork-lock	8.15	Top mount	92Ω	–	PSAS4F313009XXX
U.2&U.3	Vertical	SMT	SMT	8.15	Top mount	92Ω	–	PSAS4F313001XXX
U.2&U.3	Vertical	SMT	SMT	8.15	Top mount	92Ω	–	PSAS4F313007XXX
U.2&U.3	Vertical	SMT	DIP	8.15	Top mount	92Ω	–	PSAS4F313008XXX
U.2	Vertical	SMT	DIP	8.15mm	Top Mount	92Ω	Wide base	PSAS4F313011xxx
U.2&U.3	Vertical	SMT	Fork lock	8.15mm	Top Mount	85Ω	–	PSAS4F313018xxx
U.2&U.3	Vertical	SMT	SMT	8.15mm	Top Mount	85Ω	–	PSAS4F313028xxx
U.2	R/A	SMT	DIP	2.85mm	Sink type	92Ω	–	PSAS4F213004xxx

PART NUMBERS

Note: More options are available upon request. Please contact your local sales representative.

SAS/PCIe 4.0 Header								
Application	Orientation	Termination Type	Retainers	Height (mm)	Mount Type	Impedance	Others	Part Numbers
U.2	Vertical	SMT	SMT	8.35	Top mount	92Ω	–	PSAS4M313006XXX
U.2	Right Angle	SMT	SMT	2.55	Sink type	92Ω	–	PSAS4M213008XXX
U.2	Right Angle	SMT	SMT	4.00	Sink type	92Ω	–	PSAS4M213002XXX
U.2&U.3	Right Angle	SMT	SMT	2.55	Sink type	92Ω	–	PSAS4M213001XXX
U.2&U.3	Right Angle	SMT	SMT	–	Straddle Mount	92Ω	With SIO pins	PSAS4M213012XXX
U.2	R/A	SMT	SMT	5.3mm	Top mount	85ohm	–	PSAS4M213018xxx
U.2	R/A	SMT	SMT	2.75mm	Top mount	85ohm	–	PSAS4M213017xxx

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