SATA (Serial ATA) Connectors

CONNECTORS FOR HIGH CAPACITY STORAGE SERVERS

Amphenol offers a wide range of high performance SATA connectors. They are designed to support up to 12Gb/s, enabling the implementation of low cost, high speed, high capacity Hard Disk Drive (HDD). The connectors are SATA compliant and meet a wide range of vertical and right angle configurations for usage across server and storage equipment, HDDs and HDD carriers.

- Extends differential signaling from 1.5Gb/s to 12Gb/s
- Staggered contact lengths for hot plugging applications
- Contact range from 7 to 22 positions
- Various plating options available

TARGET MARKETS

FEATURES

FEATURES	BENEFITS
Staggered contact lengths	Provides sequential contact mating for hot plugging
Vertical and right angle configurations	Suitable for servers, storage backplane, HDDs and HDD carriers
High speed serial interface	Supports higher data rates up to 12Gb/s
Vertical receptacle heights scalable from 8.15 to 34mm	Provides the option to use connector height as an alternative to using flex cable
Contact range from 7 to 22 positions	Supports a wide range of customer application
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 Finish: Gold over nickel
- Solder Area Finish: Tin over nickel
- Retainer Clip Base Metal: Copper alloy
- Retainer Finish: Tin over nickel
- Housing: High temperature thermoplastic (UL 94V-0)

ELECTRICAL PERFORMANCE

- Contact Resistance: 30mΩ max. initial; 15mΩ max. change after test
- Current Rating: 1.5A min. per contact with temperature rise not exceeding 30˚C

MECHANICAL PERFORMANCE

- Durability: 500 mating cycles
- Mating Force: 45N max.
- Unmating Force: 10N 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 Deg˚C to +85˚C. Per EIA 364–32, test condition I
- Mixed Flow Gas: Expose 1/2 samples unmated for 7 days and then mated for 7 additional days. The other 1/2 samples are exposed mated for 14 days. Per EIA 364–65, class IIA

APPROVALS & CERTIFICATION

- UL

SPECIFICATIONS

- Amphenol Product Specification: GS–12–194 & GS–12–386

PACKAGING

- Tray/Tube/Tape and Reel available upon request

TARGET MARKETS/APPLICATIONS

Audio/Video Storage

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

Embedded System Board

PART NUMBERS

Connector	Performance	Orientation	Termination	No. Of Positions	Part Numbers	Others
Header	3Gb/s	Vertical	SMT	7	10035691	–
Header	12Gb/s	Vertical	SMT	7	SAT3M3232012TR	–
Header	6Gb/s	Vertical	SMT	22	10117764	–
Receptacle	6Gb/s	Vertical	SMT	22	10029065	–
Receptacle	6Gb/s	Vertical	SMT	22	G16CEJ1210THR	High Rise
Header	6Gb/s	Right Angle	SMT	7	10089036	–
Header	6Gb/s	Right Angle	SMT	22	10101788	–
Receptacle	6Gb/s	Vertical	SMT	22	10031569	–
Header	3Gb/s	Vertical	Through hole	7	59333	–
Receptacle	6Gb/s	Vertical	Press-fit	22	10022676	–
Header	12Gb/s	Right Angle	SMT	7	SAT3M2132072TR	–

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