

# 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



### FEATURES

- Staggered contact lengths
- Vertical and right angle configurations
- High speed serial interface
- Vertical receptacle heights scalable from 8.15 to 34mm
- Contact range from 7 to 22 positions
- Stamped clips act as connector retainers for robust PCB attachment
- Molded guideposts help mating halves to self-align by providing angled lead-ins

### BENEFITS

- Provides sequential contact mating for hot plugging
- Suitable for servers, storage backplane, HDDs and HDD carriers
- Supports higher data rates up to 12Gb/s
- Provides the option to use connector height as an alternative to using flex cable
- Supports a wide range of customer application
- Provide additional mechanical strength after soldering
- 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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