

SAS to Dual SATA Interposer

KEY FEATURES

- Single Chip Solution Marvell 88SF9210
- Native Command Queuing: 32 outstanding commands per SATA host port for high performance
- T10 Protection Information Model: Protection information fields can be verified, inserted, or deleted from the data stream
- Diagnostic Capabilities: Including Send Diagnostic, Mode Select, Mode Sense
- Error Handling: Well-defined Link layer and Transport layer error handling
- Online FW Upgrade: Upgradable via Marvell GUI-based FW utility
- SPI Flash Interface: External flash containing configuration data and firmware code



SATA devices and native SAS devices are significantly different. SATA devices are inherently single-port, half-duplex and designed to operate with a single host, while SAS devices are dual ports, full duplex, and often assigned to operate with multiple hosts concurrently. In order to make a SATA device respond like a SAS device that is capable of receiving commands across both ports simultaneously (from multiple hosts if necessary) a more sophisticated interposer is required. This class of device is called a SAS to SATA bridge or Interposer, which presents itself to the host as a native SAS device. These devices have proven to be popular in applications where the preference is for the lower cost-per-gigabyte SATA drives, while maintaining all of the system-level benefits of native SAS connectivity. The Unigen SAS to SATA Interposer is in full compliance with SAS 6Gb/s, 3Gb/s and SATA 6Gb/s, 3Gb/s. It is designed with the Marvell 88SF9210, 6Gb/s SAS to SATA bridge to produce maximum performance with speed negotiation and signal retiming/reconditioning.

PRODUCT SPECIFICATIONS

Product Family	Description
Form Factor	Interposer
Dimensions	49.34 x 68.17 x 25 (mm)
Interface	Dual 6Gb/s SAS, Dual SATA III
Weight	< 30g

Operating Environment	Description
Operating Temperature	0°C ~ 85°C
Storage Temperature	-40°C ~ 95°C
Non-Operating Humidity	5% ~ 90%
Non-Operating Shock	1,500G
Non-Operating Vibration	20G

Power	Description
Power Requirement	12V, 3.3V ± 5%
Power Consumption (idle)	1.35W

Performance	Description
Sequential Read/Write (max)	Read: 12 Gb/s Write: 12 Gb/s
4K Random Read/Write (max)	Read: 12 Gb/s Write: 12 Gb/s
Mean Time Before Failure (MTBF)	≧1,000,000 hrs

ORDERING INFORMATION

Unigen Part Number
UGS1103MA3002C