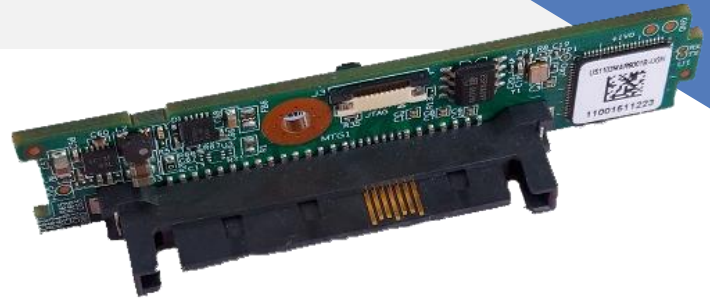


# SAS-to-SATA Interposer



## KEY FEATURES

- Marvell 88SF9110 6Gb/s SAS to SATA single-chip bridge controller
- 2 SAS Target Ports, 1 SATA Host Port
- SAS 2.0 / SATA 3.0 Compliant
- SATA speed negotiation to 3Gb/s and 1.5Gb/s for backward compatibility
- 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

The Unigen SAS-to-SATA Interposer offers a cost-effective solution to enable high-capacity SATA drives to be used in enterprise storage systems that demand full-duplex active-active operation and redundant high-availability (HA) connectivity. This small form factor board provides two integrated SAS target ports and one integrated SATA host port, allowing standard single-port SATA HDDs or SSDs to function as dual-ported SAS SSP target devices.

SATA devices and native SAS devices are inherently different. SATA devices are single-port, half-duplex and designed to operate with a single host, while SAS devices are dual-ported, full-duplex, and often assigned to operate across 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.

The Unigen SAS-to-SATA Interposer is in full compliance with SAS 2.0 and SATA 3.0 Specifications. It is designed with the Marvell 88SF9110 6Gb/s SAS-to-SATA single-chip bridge solution to enable maximum performance with speed negotiation and signal retiming/reconditioning. The small form factor board is targeted for integration into drive carriers with 3.5-inch or 2.5-inch drives.

## PRODUCT SPECIFICATIONS

Product Family	Description
Form Factor	Interposer
Dimensions	14.25 x 68.7 x 21.59 (mm)
Interfaces	Dual 6Gb/s SAS, Single SATA III
Weight	< 15g

Operating Environment	Description
Operating Temperature	0°C ~ 70°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)	1.10W

Performance	Description
Sequential Read/Write <sub>[1]</sub> (max)	Read: 6Gb/s Write: 6Gb/s
4K Random Read/Write <sub>[1]</sub> (max)	Read: 6Gb/s Write: 6Gb/s
Mean Time Before Failure (MTBF)	≧1,000,000 hrs

[1] US1103MAR6001x-UGN is a pass through device, performance numbers represent maximum line rate. Actual throughput will depend on the drives under test.

## ORDERING INFORMATION

Unigen Part Number
US1103MAR6001E-UGN