SANBlaze SBExpress-RM4 Dual Port NVMe Drive Test System

Overview

The SANBlaze SBExpress-RM4 is a complete turnkey PCIe® Gen 4 NVMe 2.5" SSD validation test system. The SBExpress-RM4 feature set provides unique functions applicable to all aspects of a product lifecycle - from engineering development, through validation and QA, to manufacturing test environments.

The ability to drive NVMe SSDs with a wide range of configurable attributes provides engineers with a flexible, multi-controller supported validation test platform.

Development, qualification, and certification test cycles can be highly automated, thus reducing overall test time, and rapidly surfacing errors and non-conformance.

The SANBlaze SBExpress-RM4 hardware provides a rackmount chasis with sixteen dual or single port front-accessible drives. The hardware can be easily daisy chained for maximum scaleability and provides excellent air flow for thermal chamber testing.

System Features

- PCIe® Gen 4
- Gen4 PCIe NVMe testing on a Gen3 or Gen4 host
- Sixteen drives, all front accessible
- Hot plug, slot power, and drive presence under software control
- All sixteen drives can be single or dual port with a single U.2 riser. U.3 single port risers and U.3 dual port risers are also available.
- Field-installable riser cards support both single or dual port drives
- Measure voltage and power at each drive
- Optimal thermal design with unobstructed air flow
- Six fans all speed-controlled through temperature sensing on each fan (user controllable through config file)
- LFM for 15mm drive is 1,373
- 38 temperature monitoring points
- 25W per slot at 75C
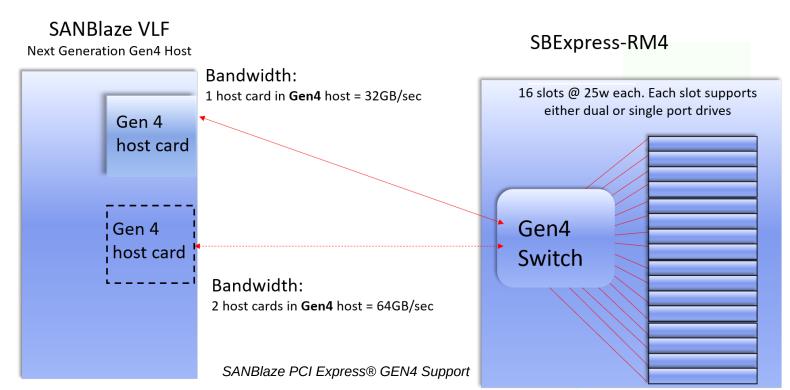- Voltage margining +/- 15%

Software Features

- Test coverage for all aspects of the NVMe specification
- UNH Conformance Testing supported
- NVMe-MI (Management Interface) testing over SMBus supported
- SGL, SR-IOV, full namespace control and reservations
- Drive multiple ports of traffic simultaneously
- Send specific or custom op codes in an easy to use scriptable format
- Read / write / compare testing
- Error injection
- Vendor-unique commands supported
- Drive and test single or multiple NVMe target devices

Thermal Characteristics

Temperature Rating	
Temperature Rating	-5C to 75C
Humidity	95% RH Non-condensing

Dimensions

Height	3.5"	Depth w/ Handles	22 3/4
Width w/out Ears	17 1/8"	Depth w/out Handles	21 3/4
Width w/ Ears	19"		

SANBlaze VLF
Next Generation Gen4 Host

SBExpress-RM4

Gen 4 host card

Gen 4 host card

Bandwidth:
1 host card in **Gen4** host = 32GB/sec

Bandwidth:
2 host cards in **Gen4** host = 64GB/sec

SANBlaze PCI Express® GEN4 Support

16 slots @ 25w each. Each slot supports either dual or single port drives

Gen4 Switch

SANBlaze VLF and SBExpress-RM4

Contact SANBlaze to Learn More

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All information in this document is subject to change. Configurations rely on host system BIOS support and may be restricted by the host. Contact SANBlaze for additional information.