RAM-SAN™

5-TB

The World's Fastest Storage®

RamSan-620

Flash

- **2-5 TB Flash Storage**
- **3 Gigabytes per Second**
- **250,000 IOPS**
- **2-8 FC Links (4Gb)**

RamSan-620

(40U Rack) 20 RamSan-620 Flash systems: 100-TB, 60-GB/s, 5000K IOPS

Very Fast Solid State Disk (SSD)

The RamSan-620 storage system is the World's Fastest Flash Storage system. With a capacity of 5-TB, 3-GB/sec bandwidth, and 250,000 IOPS, the RamSan-620 sets the bar for Enterprise Flash storage. Reliability and system management is very important. The RamSan-620 incorporates 2 Error Correcting Circuits (ECC) and has the many standard management features inherent in all RamSan storage systems. As is the case with all previous RamSan systems, the RamSan-620 is quick and easy to install.

Features

The RamSan-620 has the features you expect.

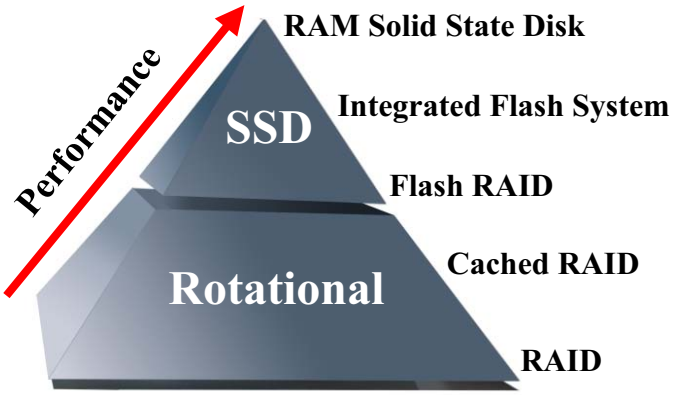
- A Complete Flash storage system in a 2U rack
- Low Overhead, Low Power, High Performance
- High IOPS, Bandwidth, Capacity
- Standard Management Capabilities
- Two Flash ECC Correction Levels
- Embedded wear-leveling PowerPC Controllers
- Includes Super Caps for orderly power down
- Quick and Easy to Install
- Fibre Channel or Infiniband controllers
- Scalable, Expandable, Flexible
- Low initial cost of ownership
- Low incremental upgrade cost
- Add performance and capacity incrementally

Automatic Error Checking

Storage data integrity is provided by the use of **SLC** Flash chips with two independent methods of ECC. Each Flash chip incorporates an ECC data field within the chip for initial checking. Additionally, each set of flash chips is organized as a board-level RAID; thereby eliminating any single chip failure from corrupting data. Each storage board has an embedded PowerPC running the Flash wear-leveling algorithm.

Applications for the RamSan-620

Databases	**Hot Files**
Video Editing	**Index Files**
Lookup Table	**Rendering**
Data Warehousing	**Web Content**
Financial Modeling	**Check Points**
Data Acquisition	**Simulations**



Call or Email TMS at Sales@RamSan.com

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(713) 266-3200 **www.RamSan.com**

ENTERPRISE FLASH STORAGE

- The RamSan-620 uses the most reliable type of NAND Flash: Single Layer Cell (SLC).
- The RamSan-620 system has two levels of protection:
  - Level 1: Proprietary error correcting code (ECC) that detects and corrects single bit errors for each 128 byte chunk of data.
  - Level 2: RAID algorithm to ensure that the failure of a Flash memory chip does not result in data corruption.
- A sophisticated wear leveling algorithm built in to keep the system from wearing out for over 12 years under the most demanding write conditions.

DATA RETENTION

- Completely nonvolatile solid state disk

FLEXIBLE DATA MANAGEMENT

- A LUN can be created that accesses a single card or set of cards in the RamSan-620. These LUNs can then be seen externally by servers, storage appliances, or controllers.
- The RamSan-620 units can be deployed as single modules/arrays and used for 100% read-intensive data or as read-cache.

RamSan-620

SCALABILITY

- 2 to 5-TB SLC Flash Storage
- Multiple RamSan-620s can be used to scale to higher capacities: one 40U rack can hold 100-TB

LUN SUPPORT

- 1 to 1024 LUNS with variable capacity per LUN
- Flexible assignment of LUNs to ports

MANAGEMENT

- Browser-enabled system monitoring, management, and configuration
- SNMP support
- Telnet management capability
- Front panel displays system status and provides basic management functionality

FIBRE CHANNEL CONNECTION

- 4-Gb Fibre Channel controllers
- 2 ports standard; up to 8 ports available
- Supports point-to-point and switched fabric topologies
- Interoperable with most Fibre Channel Host Bus Adapters, switches, and operating systems

INFINIBAND CONNECTION

- 4x InfiniBand (10-Gbit)
- 1 port standard; up to 4 ports available
- Supports SRP Upper Layer Protocol
- Interoperable with most InfiniBand Host Channel Adapters, switches, and operating systems

Specifications

Capacity	(unit)	2-5 TB SLC Flash
I/Os per second read/write		250,000 (random)
Bandwidth		3-GB/second
Latency		80 μs
Enterprise Protection		Board-level RAID
		Chip-level ECC
Power Supplies		Redundant Hot-Swap
Size		3.5" (2U) x 18"
Power Consumption		325 Watts
Weight (maximum)		35 lbs
Interfaces : Fibre Channel		2-8 (4Gb)
Infininband		1- 4 (10Gb)

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