

# RAM-SAN™

The World's Fastest Storage®

- **3 Gigabytes per Second**
- **250,000 IOPS**
- **16-64 GB RAID Cache**
- **4-8 FC Links (2Gb)**
- **Unlimited RAID Capacity**

## Advanced RAID Cache

The RamSan-330 is the fastest, largest external cache around. It acts as a high speed buffer for any number of RAID devices to provide 100x less latency and 50x more bandwidth than the best mechanical disk drives. It requires no special software and is simply attached between the RAID's and the server (or SAN). All accessed data is automatically cached on the RamSan-330 to drastically accelerate storage performance.

## Fast Cache for any Storage Environment

The RamSan-330 is an invisible, RAID cache that automatically caches reads and writes onto its high speed RAM for maximum acceleration. It can accelerate an entire SAN automatically, or directly connect to

## RamSan-330



RamSan-330

storage to make existing RAID act like the fastest datacenters on the market.

## Installation and Management

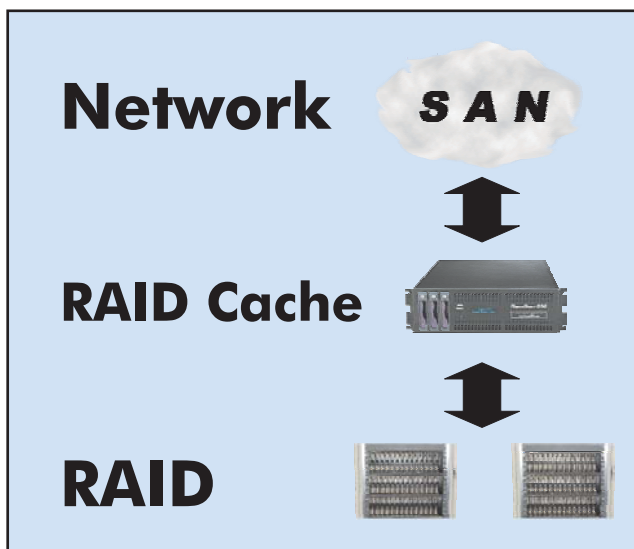
The RamSan-330 is installed by rearranging FC cables. In its simplest configuration, it provides a direct link between one storage device and one server. In its expanded configuration, it can be linked through Fibre Channel switches to hundreds of servers, workstations and storage devices via SANs. Full remote monitoring and configuration capabilities are available over any browser via a protected Java applet. Basic functions are also available from the front panel. The RamSan-330 is fully SNMP compatible.

## Highly Reliable

With any storage device, reliability is a primary concern. The RamSan-330 is designed to offer superior reliability to internal caching systems. Its standard features include: hot swap power supplies, failover Fibre Channel ports, SNMP compatibility, three redundant internal batteries, and three redundant, hot swappable power fail backup disks.

## Best of Both Worlds

The RamSan-330 offers an ideal mix of speed and data persistence. To ensure non-volatility, the RamSan-330 provides redundant cache destaging and internal battery support. In the event of external power loss, internal redundant batteries will keep the unit powered long enough to copy its data both to internal redundant hard disks and (if available) to an external storage device. This helps ensure the resumption of normal operation as quickly as possible after a disturbance.



RamSan-330 Configuration

## CACHING

- Supports three distinct caching methods, configurable per system or per LUN.
- Write-through caching: the server is not notified that a write is committed until it is written to disk.
- Write-back caching: all writes are to the RamSan-330. In the background, the system uses available bandwidth to flush writes to the external storage.
- Read-ahead caching: optimizes reads by prefetching blocks from disk in anticipation of system storage requests.

## FIBRE CHANNEL CONNECTIVITY

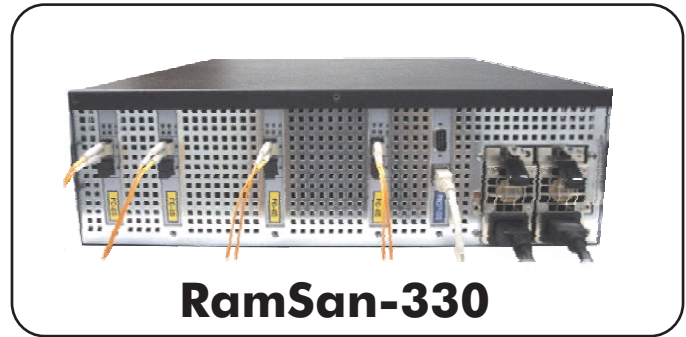
- 2-Gigabit Fibre Channel
- 4 ports standard; up to 8 ports available
- Supports point-to-point, arbitrated loop, and switched fabric topologies
- Invisible link for up to 64 RAID LUNs
- Full fabric support and connectivity to Fibre Channel storage, servers, and switches

## CACHE DESTAGING

- Non-volatile, fully destaging cache.
- Redundant internal batteries power the system 25 minutes after power loss
- Automatically backs up data to external RAID and to redundant internal disks at 90 MB/sec

## LUN SUPPORT

- 1 to 64 LUNs with variable capacity per LUN
- Flexible assignment of LUNs to ports and to corresponding storage LUNs
- Hardware LUN masking



**RamSan-330**

## MANAGEMENT

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

## RELIABILITY AND AVAILABILITY

- ECC memory error protection
- Internal redundancies
  - Power supplies and fans
  - Backup battery power (n+1)
  - Backup hard disk drives (RAID3)
- Hot swappable components
  - Three backup hard disk drives (front access)
  - Power supplies
- Active:Passive Fibre Channel failover (optional)

## ABOUT TEXAS MEMORY SYSTEMS

Since 1978, Texas Memory Systems (TMS) has specialized in high bandwidth, low latency, I/O-intensive storage systems. While the primary feature of our products has always been high performance, we achieve this performance without resorting to overly complex circuitry or unwieldy protocols. This emphasis on simplicity allows TMS to deliver outstanding performance using mature technologies and readily available off-the-shelf components.

TMS systems were originally designed to meet the needs of the U.S. defense industry. This market has always demanded the ultimate in performance and TMS has always delivered it. The RamSan-330 delivers a level of performance previously unavailable in a commercial storage product.

Call or Email Nicole: [Nicole@superSSD.com](mailto:Nicole@superSSD.com)

<b>RamSan-330 Specifications</b>	
<b>I/Os per second</b>	250,000
<b>Capacity</b>	16-64 GB
<b>Bandwidth</b>	3 GB/sec
<b>Fibre Channels: 1Gb, 2Gb</b>	2 to 8 Ports
<b>Latency</b>	<20 microseconds
<b>Disk Drives</b>	3 Hot-Swap
<b>Power Supplies</b>	2 Hot-Swap
<b>Batteries</b>	3 Redundant
<b>Size</b>	5.25" (3U) x 25"
<b>Power Consumption (peak)</b>	350 Watts
<b>Weight (maximum)</b>	80 lbs

### **Texas Memory Systems, Inc.**

11200 Westheimer Suite 1000, Houston, Texas 77042

(713) 266-3200

[www.superSSD.com](http://www.superSSD.com)