

# 2510 Memory Appliance

## Simply Accelerate Legacy Applications and Seamlessly Transform Your Data-Center to Run at the Speed of Memory



### Highlights

#### Features

- Accelerate legacy applications with protection of investment in legacy storage and backup operations
- Migrate from disk to flash with no disruption
- Protect from data center outages with memory-speed mirroring
- Deploy transparently with zero downtime and with no configuration change for servers or SAN storage
- Hardware-accelerated memory performance with up to 1 Million IOPS and sub-millisecond latency
- Scale seamlessly to 1 PB of data and 256TB memory tier per HA pair

#### Supported configurations

- All legacy storage arrays, including EMC, HP, IBM, Hitachi, Dell, Fujitsu and NetApp arrays
- All applications, including Oracle (standalone or RAC), SQL Server, VMware ESX, DB2 and Sybase
- All leading Fibre Channel switches, including Brocade and Cisco

The 2510 Memory Appliance brings the Speed of Memory to your legacy SAN infrastructure, non-disruptively transforming your performance-challenged IT environment into a high performing all-silicon data center. The 2510 appliances deliver tiering, migration and protection services through the Violin Maestro software suite – all with no downtime to your applications and with no disruption to your existing storage operations. In addition to dramatic application acceleration, the 2510 protects your existing investments and drives down the Total Cost of Ownership (TCO) of future infrastructure.

### Enterprise Memory Services for your existing storage infrastructure

Rather than wasting money and effort extracting marginally better performance from spinning disk storage, 2510 appliances offer a simple and cost-effective path to a highly scalable memory-speed infrastructure. Violin's Maestro software suite is hardware accelerated by the 2510 Memory Appliance, delivering a rich set of Enterprise Memory Services including:

- **Acceleration and Real time Memory Tiering:** The 2510 accelerates applications by servicing most I/O from the scalable Memory Tier built into the appliances and extended with Violin 6000 Series Memory Arrays. Patented, hardware accelerated algorithms predict application access patterns in real-time to ensure that most of the reads are serviced by the Memory Tier. Certified to work with all leading storage arrays, the 2510 provides immediate and transparent acceleration to your applications, even when they continue to use legacy spinning disk storage. None of the existing back-up and disaster recovery processes needs to be changed.
- **Migration without downtime:** The highly optimized Memory Services Engine built into the 2510 appliance enables data to be transparently migrated from disk to flash while applications continue to operate at accelerated speeds. Once migrated, the legacy arrays can be retired or repurposed for less performance sensitive applications. The Maestro software suite builds on the seamless deployment model of the 2510 to manage unlimited migrations.
- **Protection of Mission-Critical Data:** Hardware-accelerated algorithms implemented in the Memory Service Engine enable asynchronous high performance data mirroring between multiple Violin Memory Arrays across any distance for protection against disasters and datacenter wide failures. With complete flexibility to manage the Recovery Point Objective (RPO), Maestro provides disaster protection while simultaneously accelerating the applications with Memory Tiering.

### Drive transformation without disruption

Business-critical applications have stringent service level agreements and uptime requirements. Recognizing this reality, Violin Memory Appliances are designed to provide high performance Memory Services without any downtime or disruption to your applications. The 2510 is deployed as a transparent Fibre Channel proxy device, between the application servers and the storage arrays, with absolutely no changes to the current configuration of your applications, servers and storage.

The 2510 passes through all write I/Os and status commands – as a result, the Maestro Memory Services are provided without disrupting existing Disaster Recovery and Backup processes. All the components and paths in the appliance have built-in error correcting code (ECC) circuitry to ensure data accuracy. Operating as a fully cache-coherent Active/Active HA configuration, the 2510 Memory Appliance delivers risk-free and disruption-free transformation to a highly efficient, memory-speed data center.

Model	2510
Memory Tier	192GB DRAM, 8TB Flash per unit up to 256 TB External Memory Tier with Violin 6000 Series Arrays
Backend Storage Capacity	Up to 160 TB for dual A/A HA pair with 16TB internal flash Up to 1 PB with 100TB Violin 6000 Series extension
Connectivity	8 x 4/8Gb/s Fibre Channel: SFP, LC Connector, 500m 4 servers side and 4 storage side ports
Management Interfaces	2x 10/100/1000 Mbits/sec auto-sensing Ethernet ports (RJ-45) Serial (RS-232) console port for management and troubleshooting
Reliability / Resiliency	Dual Active/Active Memory Appliance configuration for High Availability 2x 10 Gbits/sec ports for proprietary HA communication Automated Failover & Failback
<b>Performance</b>	
Max Throughput:	1,000,000
Max Bandwidth:	4 GB/s
Min Latency:	Less than 1 msec
<b>Dimensions</b>	
Height:	2RU (3.5" / 89mm)
Width:	15.5" / 445mm
Depth:	28.5" / 725mm
Weight:	55lbs / 25kg
Power*	430 W
Cooling	1490 BTU/hr
Environmentals	Operating Temperature Range: 10 - 35° C (50° - 95° F) Non-Operating Temperature Range: -40 - 70° C (-40° - 158° F) Humidity Range: 8-90% (non condensing) Non-Operating Humidity Range: 5 - 95% non-condensing
<b>Ecosystem</b>	
Supported Client Operating Systems	RHEL, SLES, OEL, Windows, Vmware, AIX, Solaris SPARC, Solaris x64
Supported Fabric Switches	Brocade, Cisco, Qlogic
Supported Backend Storage	Violin, EMC, Hitachi, HP, HP 3PAR, IBM, NetApp
VMWare Integration	VAAI
Management	CLI: Serial, SSH - SNMP, Web GUI, REST XML API, Violin Manager
Regulatory	USA (UL listed), Canada (CUL listed), CE Mark, FCC (Class A) <i>For a full list of specific country approvals, please contact Violin Memory</i>
* Nominal power measurements for Fibre Channel configuration	