

Road to the All-Silicon Data Center

Narayan Venkat
Vice President, Products

Real Time Data Access is a Reality



Business Transformation is Underway



Personalized Customer
Promotions at POS



Faster Transactions
Real Time Risk Assessment



Immediate Market Insights
Faster Responses



In-game Sales
Improved User Experience



Call Analysis & Delivery
New Data Services



Increase end-user productivity
Lower OPEX/CAPEX

Eliminating Latency – The Key to Higher Efficiency



CPU Cycle with
Magnetic Disk:



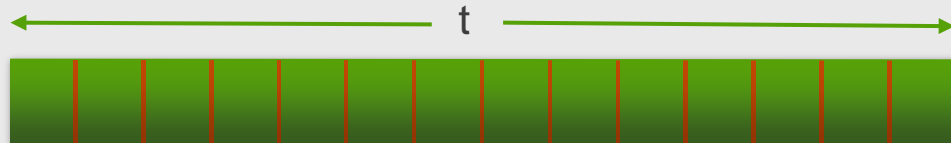
80%
Wait



20%
Work



CPU Cycle with
Memory Storage:



5%
Wait



95%
Work

Orders of Magnitude More Work In the Same Time

All Silicon Data Center Is the Only Approach

Remove the last bottleneck in
the Data Center



A Persistent Memory
Architecture is key to
delivering on the
promise

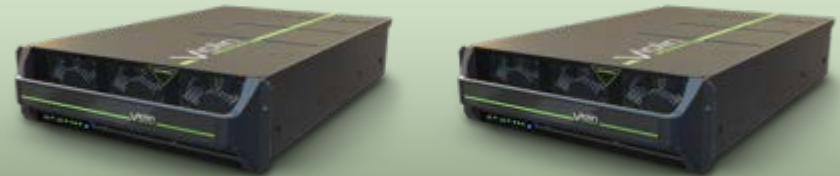
The World is Rapidly Changing for the Better

2011



8 Engines, 960 drives
1 Million Read IOPS
5 Racks or 210RU – 32,000 Watts

2012



2 Violin 6616 Memory Arrays
1 VM at 1 Million IOPS (Random R/W Mix)
6 RU (97% less) – 3,600 Watts (90% less)

Violin Memory: Making Businesses Run @ the Speed of Memory

Founded in
'05

- Team of Flash industry pioneers
- Flash Memory Arrays Since 2009
- 4th Generation Platform

- Doubled employee count over last 18 months
- HW & SW innovation
- 200+ Engineering team

450
Employees

Next Gen
Tier 1

- Designed for Tier 1
- Worldwide support capability
- Proven industry-leading performance

- Fortune 500 leaders
- Aggressively adding logos
- Web, Telco, Banking, Retail, Govt., Healthcare, etc.

300+
Customers

TOSHIBA
Leading Innovation >>

- Toshiba: NAND Flash Inventor with close R&D collaboration
- Leading strategic investors: Toshiba, SAP, Juniper...

- World Wide Headquarters in Silicon Valley, CA
- SV Startup of the Year (2011)
- Global Presence



violin
MEMORY

Violin Delivers Storage @ the Speed of Memory

Memory Cards



Scale-Out Applications on
Server-based Flash

Memory Cache



Enterprise Applications on
Legacy Storage

Memory Arrays



Enterprise Applications on
Memory Storage

Violin Symphony

Predictive, Automated and
Centralized control



violin
MEMORY

New Platform for Business Applications

ORACLE®

vmware®

SAP®

CITRIX®



Microsoft®
SQL Server®



Microsoft®
SharePoint® 2013



Microsoft®
Exchange Server 2013

violin
MEMORY

The Road to the All-Silicon Data Center is paved with Flash

