

MiniBank™

IDEAL FOR COST SENSITIVE APPLICATIONS

- 4TB to 8TB RAID-protected storage per MiniBank
- MiniBank Arrays scale to 48TB of iSCSI SAN storage
- Embedded server saves cost, power, cooling and rackspace
- Easy to use open systems platform



MiniBank Scale-Out Appliance Overview

MiniBank appliances deliver both server and shared storage resources for small distributed sites needing protected storage. Up to six MiniBanks can be configured together as a high-performance iSCSI SAN MiniBank Array. Each MiniBank contributes a free virtual server that can access the shared capacity and performance of the SAN. Both storage and applications are protected in the case of a MiniBank failure. The award-winning innovation of hosting servers in an iSCSI SAN eliminates the need for standalone physical servers resulting in dramatic reduction in power, cooling, rack space and cost.

Key Features

High-availability iSCSI SAN

MiniBanks can be combined to create a scalable iSCSI SAN array with no single point of failure. Storage can be logically and physically expanded with applications running.

Save up to 40% on power

A virtual server running on each MiniBank eliminates external physical servers and reduces rackspace, power, cooling and acquisition costs.

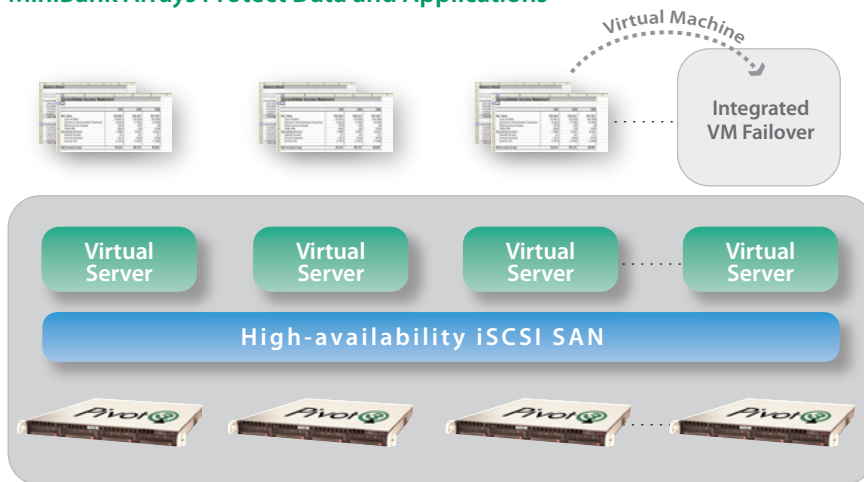
Reduce Support Costs

Improve uptime for applications with VM Failover™ which automatically restarts applications on an available MiniBank in the event of an appliance failure.

Simplify configurations

The Pivot3 scale-out architecture based on standard appliances, standard Gigabit Ethernet networks and open systems software streamlines complex installations.

MiniBank Arrays Protect Data and Applications



Storage Sizing Guide

# MiniBanks	Usable RAID 5 Capacity*		Global Sparing	
	4 Drives each	1TB Drives	2TB Drives	Enabled
1		3.0	6.0	NA
2		6.0	11.9	NA
3		6.6	13.3	Yes
4		10.3	20.8	Yes
5		14.1	28.4	Yes
6		17.9	36.2	Yes

* 1TB = 1,000,000,000,000 bytes

Performance Specifications

Linear scaling for up to 6 MiniBank appliances

Scales to 12 gigabits per second
Scales to 6 parallel x86 RAID controllers
Scales to 36 GB ECC DIMM RAM

Scales to 6 Quad-core x86 CPUs
2 dedicated LAN GigE ports per server

Capacity Specifications

Linear scaling for up to 6 MiniBank appliances

Each MiniBank Array scales up to 48 TBs
Supports up to 128 volumes
Supports up to 128 initiators

MiniBank Specifications

Dimensions: 1U Height: 1.7", Width: 17.2", Depth: 25.6"
Weight: 36 lbs / 16.4 kg
Processor: Intel® Nehalem® E5500 series
Memory: 6GB DDR 1333 ECC Registered DIMM
Drives: 4x hot-swappable Enterprise SATA II 3.0 Gbps, 5400 rpm
iSCSI: Dual Gigabit Ethernet; Aggregated in Arrays
Network: Two Gigabit Ethernet
Management: Integrated IPMI2.0 with Dedicated LAN

Cooling: Four 45mm fans
Operating Environment: 10°C – 35°C (50°F – 95°F)
Operating Relative Humidity: 8 – 90% non-condensing

Power Rating: 560W AC power supply w/ PFC
Typical: AC voltage 120V (1.71 amp); AC Voltage 220V (0.93 amp) @ 50-60HZ

Thermal Rating:
Typical: 695 BTU/Hr @120V; 695 BTU/Hr @ 220V

Regulatory:
Power Supply Safety / EMC
USA - UL listed
Canada - CUL listed
China - CCC Mark
Europe - CE Mark
Germany - TUV Certified
EN 60950/IEC 60950-Compliant
CB Report and CCC Certification

Warranty:
Three-year limited hardware warranty

Optional Hosted Operating Systems

Microsoft Windows Server 2003 R2 32 bit
Microsoft Windows Server 2003 R2 64 bit
Windows Storage Server 2003 R2
RedHat Enterprise Linux 5.x
CentOS 5.x
Suse Linux 11.x

Ethernet Requirements

2 Gigabit Ethernet switches for fault tolerance
Sufficient switch ports for 2 ports per appliance



Availability Specifications

MiniBank Arrays have no single point of failure

- RAID 5e protects data from a complete appliance failure
- Virtual sparing and parallel rebuilds speed recovery times
- Accelerated rebuild priority for critical volumes

VM Failover for server applications in MiniBank Arrays

- Server applications restart automatically on an appliance failure
- No complex cabling or dedicated hardware
- No additional software licenses

Management Specifications

Alarms and Alerts

- Audible alarms provided for failure notification
- State-sensitive LEDs
- GUI state change notification
- SNMP MIB provided for email notification and 3rd party integration

Pivot3 management software

- **RAIGE Director** runs on any PC providing intuitive GUI or cli
- **RAIGE Connection Manager** automates iSCSI connections
- **RAIGE OS** automates advanced data protection

Dynamic configuration

- Add appliances seamlessly
- Automatically load balance performance and capacity to eliminate hot spots
- Change volume settings, including volume expansion, dynamically