



For more information visit www.Howard.com or call us at 888.912.3151.



PS50E STORAGE ARRAY

An unmatched entry point into an enterprise SAN, the PS50E provides an affordable option for organizations requiring a tactical storage solution with an eye towards future strategic growth.

DATA SERVICES INCLUDE:

- Auto-Replication
- Automatic Load Balancing
- Auto-Snapshot Manager¹
- Auto-Stat Disk Monitoring System
- Volume Consistency Sets
- Multi-Path I/O²
- PS Group Manager
- Pooled and Tiered Storage
- RAID Load Balancing
- Snapshot and Auto-Replication Scheduler
- E-mail Home
- Storage Virtualization
- Volume Cloning
- Volume Management
- Volume Snapshot



PS STORAGE STACK



PS Series storage arrays are stackable as multi-array system configurations for customized performance and capacity

TECHNICAL HIGHLIGHTS

Volumes	Up to 1,024
Snapshots	512 per volume / up to 10,000 total
Hosts accessing group	Up to 512
Host interface	Any standards-compliant iSCSI initiator
Controllers	1
Disk capacity	250 GB*; 7,200 RPM SATA II
System capacity	1.75 TB**
Number of drives	7 (supports up to 14)
I/Os per second	60,000
Memory (battery-backed)	1 GB
Gb network interfaces	3
	Copper (standard)
	Optical (SFP purchased separately)
Sustained system bandwidth	Up to 140 MBps
Operating systems supported	Windows® 2000, Windows Server 2003, Windows XP, NetWare®, Linux, Solaris™, AIX®, HP-UX, Mac OS® X, VMware® ESX
Upgrade option	Can be online upgraded to PS70E or PS100E
Expansion option	Can be combined with other PS systems in a PS Storage Stack

RAID SUPPORT

Automatic RAID 5, RAID 10 and RAID 50 configuration

RELIABILITY

Redundant, hot-swappable controllers, power supplies/cooling fans, and disks
Write-back cache with 72-hour battery backup
Individual disk drive slot power control

ENCLOSURE MONITORING SYSTEM

Automatic spare configuration and utilization
SMART
Automatic bad block replacement
Auto-Stat Disk Monitoring System (ADMS) to monitor health of data on disk drives

MANAGEMENT INTERFACES

SNMP, telnet, SSH, HTTP, Web (SSL), host scripting
Serial console
Multi-administrator support

SECURITY

CHAP authentication
Access control for iSCSI and management interfaces

NOTIFICATION METHODS

SNMP traps, e-mail, syslog

POWER

Input voltage/power	100-240 VAC (auto-sensing) / 450 VA
Input current	4.0 A (maximum) @ 115 V
Input frequency	50-60 Hz
Power supplies	Dual 400 W
Power consumption	450 W


ENVIRONMENTAL

Temperature range	5 to 40 °C / 41 to 104 °F
Storage temperature	-30 to 60 °C / -22 to 140 °F
Altitude	-70 to 3,048 m operational / -305 to 12,192 m non-operational
Relative humidity	20 to 80% non-condensing operational / 5 to 95% non-condensing non-operational
Thermal output	1,500 BTU per hour, 450 W (maximum configuration)
Shock	30 G for 2 ms operational / 30 g for 10 ms 1/2 sin non-operational
Vibration	.1 G @ 10 to 100 Hz operational / Random 1.04 grms 2-200 Hz non-operational
Acoustics	Sound Power Operating: <5.8 db LpA @ 20 °C

PHYSICAL

Height	13.33 cm / 5.25 in / 3 EIA units
Width	44.77 cm / 17.625 in / 1EC Rack Compliant
Depth	63.5 cm / 25 in
Weight	36.74 kg / 81 lb (maximum configuration)

AGENCY APPROVALS

Safety standards	UL 60950, CSA 60950, S Mark EN 60950 (Europe), CB Scheme
Electromagnetic Compatibility (EMC)	EN 55022 Class A, CE Mark, EN 55024 Immunity, ITE, FCC Class A, VCCI Class A (Japan) AN/NZS 3548 Class A (Australia/New Zealand)
C-Tick compliance	 N 4292

LIMITED WARRANTY

2 years telephone support: business hours 5x9
1 year software maintenance and updates
2 years hardware (return to factory, first 90 days advance replacement, 1 year battery, 3 years on disks)

SUPPORT PROGRAMS

Complete Care	24-hour priority online/telephone access, software maintenance and updates, next business day advance hardware replacement
Complete Care Plus	24-hour priority online/telephone access, software maintenance and updates, four hour onsite advance hardware replacement

*1 GB = 1,000,000,000 bytes, useable space may be less
†Qualified for Microsoft Windows Server 2003

**1 TB = 1,000,000,000,000 bytes, useable space may be less
‡Qualified for Microsoft Windows Server 2000 and 2003, Linux and Sun Solaris Operating Systems



9 Townsend West, Nashua, NH 03063
Tel 603.579.9762 / Fax 603.579.6910 / www.equallogic.com



For more information visit www.Howard.com or call us at 888.912.3151.



PS70E STORAGE ARRAY

An unmatched entry point into an enterprise SAN, the PS70E provides an affordable option for organizations requiring a tactical storage solution with an eye towards future strategic growth.

DATA SERVICES INCLUDE:

- Auto-Replication
- Automatic Load Balancing
- Auto-Snapshot Manager¹
- Auto-Stat Disk Monitoring System
- Volume Consistency Sets
- Multi-Path I/O²
- PS Group Manager
- Pooled and Tiered Storage
- RAID Load Balancing
- Snapshot and Auto-Replication Scheduler
- E-mail Home
- Storage Virtualization
- Volume Cloning
- Volume Management
- Volume Snapshot



PS STORAGE STACK



PS Series storage arrays are stackable as multi-array system configurations for customized performance and capacity

TECHNICAL HIGHLIGHTS

Volumes	Up to 1,024
Snapshots	512 per volume / up to 10,000 total
Hosts accessing group	Up to 512
Host interface	Any standards-compliant iSCSI initiator
Controllers	1
Disk capacity	250 GB*; 7,200 RPM SATA II
System capacity	3.5 TB**
Number of drives	14
I/Os per second	60,000
Memory (battery-backed)	1 GB
Gb network interfaces	3
	Copper (standard)
	Optical (SFP purchased separately)
Sustained system bandwidth	Up to 300 MBps
Operating systems supported	Windows® 2000, Windows Server 2003, Windows XP, NetWare®, Linux, Solaris™, AIX®, HP-UX, Mac OS® X, VMware® ESX
Upgrade option	Can be online upgraded to PS100E
Expansion option	Can be combined with other PS systems in a PS Storage Stack

RAID SUPPORT

Automatic RAID 5, RAID 10 and RAID 50 configuration

RELIABILITY

Redundant, hot-swappable controllers, power supplies/cooling fans, and disks
Write-back cache with 72-hour battery backup
Individual disk drive slot power control

ENCLOSURE MONITORING SYSTEM

Automatic spare configuration and utilization
SMART
Automatic bad block replacement
Auto-Stat Disk Monitoring System (ADMS) to monitor health of data on disk drives

MANAGEMENT INTERFACES

SNMP, telnet, SSH, HTTP, Web (SSL), host scripting
Serial console
Multi-administrator support

SECURITY

CHAP authentication
Access control for iSCSI and management interfaces

NOTIFICATION METHODS

SNMP traps, e-mail, syslog

POWER

Input voltage/power	100-240 VAC (auto-sensing) / 450 VA
Input current	4.0 A (maximum) @ 115 V
Input frequency	50-60 Hz
Power supplies	Dual 400 W
Power consumption	450 W


ENVIRONMENTAL

Temperature range	5 to 40 °C / 41 to 104 °F
Storage temperature	-30 to 60 °C / -22 to 140 °F
Altitude	-70 to 3,048 m operational / -305 to 12,192 m non-operational
Relative humidity	20 to 80% non-condensing operational / 5 to 95% non-condensing non-operational
Thermal output	1,500 BTU per hour, 450 W (maximum configuration)
Shock	30 G for 2 ms operational / 30 g for 10 ms 1/2 sin non-operational
Vibration	.1 G @ 10 to 100 Hz operational / Random 1.04 grms 2-200 Hz non-operational
Acoustics	Sound Power Operating: <5.8 db LpA @ 20 °C

PHYSICAL

Height	13.33 cm / 5.25 in / 3 EIA units
Width	44.77 cm / 17.625 in / 1EC Rack Compliant
Depth	63.5 cm / 25 in
Weight	36.74 kg / 81 lb (maximum configuration)

AGENCY APPROVALS

Safety standards	UL 60950, CSA 60950, S Mark EN 60950 (Europe), CB Scheme
Electromagnetic Compatibility (EMC)	EN 55022 Class A, CE Mark, EN 55024 Immunity, ITE, FCC Class A, VCCI Class A (Japan) AN/NZS 3548 Class A (Australia/New Zealand)
C-Tick compliance	 N 4292

LIMITED WARRANTY

2 years telephone support: business hours 5x9
1 year software maintenance and updates
2 years hardware (return to factory, first 90 days advance replacement, 1 year battery, 3 years on disks)

SUPPORT PROGRAMS

Complete Care	24-hour priority online/telephone access, software maintenance and updates, next business day advance hardware replacement
Complete Care Plus	24-hour priority online/telephone access, software maintenance and updates, four hour onsite advance hardware replacement

*1 GB = 1,000,000,000 bytes, useable space may be less

¹Qualified for Microsoft Windows Server 2003

**1 TB = 1,000,000,000,000 bytes, useable space may be less

²Qualified for Microsoft Windows Server 2000 and 2003, Linux and Sun Solaris Operating Systems



9 Townsend West, Nashua, NH 03063
Tel 603.579.9762 / Fax 603.579.6910 / www.equallogic.com

HOWARD™

TECHNOLOGY SOLUTIONS



PS100E STORAGE ARRAY

The PS100E delivers up to 300 MB throughput and 60,000 I/Os per second, providing organizations of all sizes with a proven storage solution for database, e-mail, print, file, and web service applications.

DATA SERVICES INCLUDE:

- Auto-Replication
- Automatic Load Balancing
- Auto-Snapshot Manager¹
- Auto-Stat Disk Monitoring System
- Volume Consistency Sets
- Multi-Path I/O²
- PS Group Manager
- Pooled and Tiered Storage
- RAID Load Balancing
- Snapshot and Auto-Replication Scheduler
- E-mail Home
- Storage Virtualization
- Volume Cloning
- Volume Management
- Volume Snapshot

For more information visit www.Howard.com or call us at 888.912.3151.

TECHNICAL HIGHLIGHTS

Volumes	Up to 1,024
Snapshots	512 per volume / up to 10,000 total
Hosts accessing group	Up to 512
Host interface	Any standards-compliant iSCSI initiator
Controllers	2
Disk capacity	250 GB*; 7,200 RPM SATA II
System capacity	3.5 TB**
Number of drives	14
I/Os per second	60,000
Memory (battery-backed)	2 GB
Gb network interfaces	3
	Copper (standard)
	Optical (SFP purchased separately)
Sustained system bandwidth	300 MBps
Operating systems supported	Windows® 2000, Windows Server 2003, Windows XP, NetWare®, Linux, Solaris™, AIX®, HP-UX, Mac OS® X, VMware® ESX
Upgrade option	Can be online upgraded to PS300E
Expansion option	Can be combined with other PS systems in a PS Storage Stack

RAID SUPPORT

Automatic RAID 5, RAID 10 and RAID 50 configuration

RELIABILITY

Redundant, hot-swappable controllers, power supplies/cooling fans, and disks
Mirrored write-back cache with 72-hour battery backup
Individual disk drive slot power control

ENCLOSURE MONITORING SYSTEM

Automatic spare configuration and utilization

SMART

Automatic bad block replacement
Auto-Stat Disk Monitoring System (ADMS) to monitor health of data on disk drives

MANAGEMENT INTERFACES

SNMP, telnet, SSH, HTTP, Web (SSL), host scripting
Serial console
Multi-administrator support

SECURITY

CHAP authentication
Access control for iSCSI and management interfaces

NOTIFICATION METHODS

SNMP traps, e-mail, syslog

HOWARD™

TECHNOLOGY SOLUTIONS

POWER

Input voltage/power	100-240 VAC (auto-sensing) / 450 VA
Input current	4.0 A (maximum) @ 115 V
Input frequency	50-60 Hz
Power supplies	Dual 400 W
Power consumption	450 W

ENVIRONMENTAL

Temperature range	5 to 40 °C / 41 to 104 °F
Storage temperature	-30 to 60 °C / -22 to 140 °F
Altitude	-70 to 3,048 m operational / -305 to 12,192 m non-operational
Relative humidity	20 to 80% non-condensing operational / 5 to 95% non-condensing non-operational
Thermal output	1,500 BTU per hour, 450 W (maximum configuration)
Shock	30 G for 2 ms operational / 30 g for 10 ms 1/2 sin non-operational
Vibration	.1 G @ 10 to 100 Hz operational / Random 1.04 grms 2-200 Hz non-operational
Acoustics	Sound Power Operating: <5.8 db LpA @ 20 °C

PHYSICAL

Height	13.33 cm / 5.25 in / 3 EIA units
Width	44.77 cm / 17.625 in / 1EC Rack Compliant
Depth	63.5 cm / 25 in
Weight	36.74 kg / 81 lb (maximum configuration)

AGENCY APPROVALS

Safety standards	UL 60950, CSA 60950, S Mark EN 60950 (Europe), CB Scheme
Electromagnetic Compatibility (EMC)	EN 55022 Class A, CE Mark, EN 55024 Immunity, ITE, FCC Class A, VCCI Class A (Japan) AN/NZS 3548 Class A (Australia/New Zealand) Korean MIC Mark, Class A

C-Tick compliance



N 4292

LIMITED WARRANTY

2 years telephone support: business hours 5x9
1 year software maintenance and updates
2 years hardware (return to factory, first 90 days advance replacement, 1 year battery, 3 years on disks)

SUPPORT PROGRAMS

Complete Care	24-hour priority online/telephone access, software maintenance and updates, next business day advance hardware replacement
Complete Care Plus	24-hour priority online/telephone access, software maintenance and updates, four hour onsite advance hardware replacement

*1 GB = 1,000,000,000 bytes, useable space may be less

¹Qualified for Microsoft Windows Server 2003

**1 TB = 1,000,000,000,000 bytes, useable space may be less

²Qualified for Microsoft Windows Server 2000 and 2003, Linux and Sun Solaris Operating Systems



PS STORAGE STACK



PS Series storage arrays are stackable as multi-array system configurations for customized performance and capacity



9 Townsend West, Nashua, NH 03063
Tel 603.579.9762 / Fax 603.579.6910 / www.equallogic.com

HOWARD™

TECHNOLOGY SOLUTIONS



PS300E STORAGE ARRAY

With 7 TB of capacity within a 3U enclosure, the PS300E is an enterprise SAN delivering best-in-class performance while providing both primary and secondary storage for database, e-mail, print, file and web service applications.

DATA SERVICES INCLUDE:

- Auto-Replication
- Automatic Load Balancing
- Auto-Snapshot Manager¹
- Auto-Stat Disk Monitoring System
- Volume Consistency Sets
- Multi-Path I/O²
- PS Group Manager
- Pooled and Tiered Storage
- RAID Load Balancing
- Snapshot and Auto-Replication Scheduler
- E-mail Home
- Storage Virtualization
- Volume Cloning
- Volume Management
- Volume Snapshot

For more information visit www.Howard.com or call us at 888.912.3151.

TECHNICAL HIGHLIGHTS

Volumes	Up to 1,024
Snapshots	512 per volume / up to 10,000 total
Hosts accessing group	Up to 512
Host interface	Any standards-compliant iSCSI initiator
Controllers	2
Disk capacity	500 GB*; 7,200 RPM SATA II
System capacity	7 TB**
Number of drives	14
I/Os per second	60,000
Memory (battery-backed)	2 GB
Gb network interfaces	3
	Copper (standard)
	Optical (SFP purchased separately)
Sustained system bandwidth	300 MBps
Operating systems supported	Windows® 2000, Windows Server 2003, Windows XP, NetWare®, Linux, Solaris™, AIX®, HP-UX, Mac OS® X, VMware® ESX
Upgrade option	Can be online upgraded to PS400E
Expansion option	Can be combined with other PS systems in a PS Storage Stack

RAID SUPPORT

Automatic RAID 5, RAID 10 and RAID 50 configuration

RELIABILITY

Redundant, hot-swappable controllers, power supplies/cooling fans, and disks
Mirrored write-back cache with 72-hour battery backup
Individual disk drive slot power control

ENCLOSURE MONITORING SYSTEM

Automatic spare configuration and utilization

SMART

Automatic bad block replacement
Auto-Stat Disk Monitoring System (ADMS) to monitor health of data on disk drives

MANAGEMENT INTERFACES

SNMP, telnet, SSH, HTTP, Web (SSL), host scripting
Serial console
Multi-administrator support

SECURITY

CHAP authentication
Access control for iSCSI and management interfaces

NOTIFICATION METHODS

SNMP traps, e-mail, syslog

HOWARD™

TECHNOLOGY SOLUTIONS

POWER

Input voltage/power	100-240 VAC (auto-sensing) / 450 VA
Input current	4.0 A (maximum) @ 115 V
Input frequency	50-60 Hz
Power supplies	Dual 400 W
Power consumption	450 W

ENVIRONMENTAL

Temperature range	5 to 40 °C / 41 to 104 °F
Storage temperature	-30 to 60 °C / -22 to 140 °F
Altitude	-70 to 3,048 m operational / -305 to 12,192 m non-operational
Relative humidity	20 to 80% non-condensing operational / 5 to 95% non-condensing non-operational
Thermal output	1,500 BTU per hour, 450 W (maximum configuration)
Shock	30 G for 2 ms operational / 30 g for 10 ms 1/2 sin non-operational
Vibration	.1 G @ 10 to 100 Hz operational / Random 1.04 grms 2-200 Hz non-operational
Acoustics	Sound Power Operating: <5.8 db LpA @ 20 °C

PHYSICAL

Height	13.33 cm / 5.25 in / 3 EIA units
Width	44.77 cm / 17.625 in / 1EC Rack Compliant
Depth	63.5 cm / 25 in
Weight	36.74 kg / 81 lb (maximum configuration)

AGENCY APPROVALS

Safety standards	UL 60950, CSA 60950, S Mark EN 60950 (Europe), CB Scheme
Electromagnetic Compatibility (EMC)	EN 55022 Class A, CE Mark, EN 55024 Immunity, ITE, FCC Class A, VCCI Class A (Japan) AN/NZS 3548 Class A (Australia/New Zealand) Korean MIC Mark, Class A

C-Tick compliance



N 4292

LIMITED WARRANTY

2 years telephone support: business hours 5x9
1 year software maintenance and updates
2 years hardware (return to factory, first 90 days advance replacement, 1 year battery, 3 years on disks)

SUPPORT PROGRAMS

Complete Care	24-hour priority online/telephone access, software maintenance and updates, next business day advance hardware replacement
Complete Care Plus	24-hour priority online/telephone access, software maintenance and updates, four hour onsite advance hardware replacement

*1 GB = 1,000,000,000 bytes, useable space may be less

¹Qualified for Microsoft Windows Server 2003

**1 TB = 1,000,000,000,000 bytes, useable space may be less

²Qualified for Microsoft Windows Server 2000 and 2003, Linux and Sun Solaris Operating Systems



PS STORAGE STACK



PS Series storage arrays are stackable as multi-array system configurations for customized performance and capacity



9 Townsend West, Nashua, NH 03063
Tel 603.579.9762 / Fax 603.579.6910 / www.equallogic.com



For more information visit www.Howard.com or call us at 888.912.3151.



PS400E STORAGE ARRAY

With 10.5 TB of capacity within a 3U enclosure, the PS400E is an enterprise SAN delivering best-in-class performance while providing both primary and secondary storage for database, e-mail, print, file, and web service applications.

DATA SERVICES INCLUDE:

- Auto-Replication
- Automatic Load Balancing
- Auto-Snapshot Manager¹
- Auto-Stat Disk Monitoring System
- Volume Consistency Sets
- Multi-Path I/O²
- PS Group Manager
- Pooled and Tiered Storage
- RAID Load Balancing
- Snapshot and Auto-Replication Scheduler
- E-mail Home
- Storage Virtualization
- Volume Cloning
- Volume Management
- Volume Snapshot

TECHNICAL HIGHLIGHTS

Volumes	Up to 1,024
Snapshots	512 per volume / up to 10,000 total
Hosts accessing group	Up to 512
Host interface	Any standards-compliant iSCSI initiator
Controllers	2
Disk capacity	750 GB*; 7,200 RPM SATA II
System capacity	10.5 TB**
Number of drives	14
I/Os per second	60,000
Memory (battery-backed)	2 GB
Gb network interfaces	3
	Copper (standard)
	Optical (SFP purchased separately)
Sustained system bandwidth	300 MBps
Operating systems supported	Windows® 2000, Windows Server 2003, Windows XP, NetWare®, Linux, Solaris™, AIX®, HP-UX, Mac OS® X, VMware® ESX
Expansion option	Can be combined with other PS systems in a PS Storage Stack

RAID SUPPORT

Automatic RAID 5, RAID 10 and RAID 50 configuration

RELIABILITY

Redundant, hot-swappable controllers, power supplies/cooling fans, and disks
Mirrored write-back cache with 72-hour battery backup
Individual disk drive slot power control

ENCLOSURE MONITORING SYSTEM

Automatic spare configuration and utilization

SMART

Automatic bad block replacement
Auto-Stat Disk Monitoring System (ADMS) to monitor health of data on disk drives

MANAGEMENT INTERFACES

SNMP, telnet, SSH, HTTP, Web (SSL), host scripting
Serial console
Multi-administrator support

SECURITY

CHAP authentication
Access control for iSCSI and management interfaces

NOTIFICATION METHODS

SNMP traps, e-mail, syslog

POWER

Input voltage/power	100-240 VAC (auto-sensing) / 450 VA
Input current	4.0 A (maximum) @ 115 V
Input frequency	50-60 Hz
Power supplies	Dual 400 W
Power consumption	450 W


ENVIRONMENTAL

Temperature range	5 to 40 °C / 41 to 104 °F
Storage temperature	-30 to 60 °C / -22 to 140 °F
Altitude	-70 to 3,048 m operational / -305 to 12,192 m non-operational
Relative humidity	20 to 80% non-condensing operational / 5 to 95% non-condensing non-operational
Thermal output	1,500 BTU per hour, 450 W (maximum configuration)
Shock	30 G for 2 ms operational / 30 g for 10 ms 1/2 sin non-operational
Vibration	.1 G @ 10 to 100 Hz operational / Random 1.04 grms 2-200 Hz non-operational
Acoustics	Sound Power Operating: <5.8 db LpA @ 20 °C

PHYSICAL

Height	13.33 cm / 5.25 in / 3 EIA units
Width	44.77 cm / 17.625 in / 1EC Rack Compliant
Depth	63.5 cm / 25 in
Weight	36.74 kg / 81 lb (maximum configuration)

AGENCY APPROVALS

Safety standards	UL 60950, CSA 60950, S Mark EN 60950 (Europe), CB Scheme
Electromagnetic Compatibility (EMC)	EN 55022 Class A, CE Mark, EN 55024 Immunity, ITE, FCC Class A, VCCI Class A (Japan) AN/NZS 3548 Class A (Australia/New Zealand)
C-Tick Compliance	 N 4292

LIMITED WARRANTY

2 years telephone support: business hours 5x9
1 year software maintenance and updates
2 years hardware (return to factory, first 90 days advance replacement, 1 year battery, 3 years on disks)

SUPPORT PROGRAMS

Complete Care	24-hour priority online/telephone access, software maintenance and updates, next business day advance hardware replacement
Complete Care Plus	24-hour priority online/telephone access, software maintenance and updates, four hour onsite advance hardware replacement

*1 GB = 1,000,000,000 bytes, useable space may be less

¹Qualified for Microsoft Windows Server 2003

**1 TB = 1,000,000,000,000 bytes, useable space may be less

²Qualified for Microsoft Windows Server 2000 and 2003, Linux and Sun Solaris Operating Systems



PS STORAGE STACK



PS Series storage arrays are stackable as multi-array system configurations for customized performance and capacity



9 Townsend West, Nashua, NH 03063
Tel 603.579.9762 / Fax 603.579.6910 / www.equallogic.com



For more information visit www.Howard.com or call us at 888.912.3151.



PS3600X STORAGE ARRAY

Equipped with sixteen 10,000 RPM SAS disk drives, the PS3600X delivers up to 30% greater I/Os per second, providing high performance storage suitable for the intense I/O workloads of enterprise transactional databases.

DATA SERVICES INCLUDE:

- Auto-Replication
- Automatic Load Balancing
- Auto-Snapshot Manager¹
- Auto-Stat Disk Monitoring System
- Volume Consistency Sets
- Multi-Path I/O²
- PS Group Manager
- Pooled and Tiered Storage
- RAID Load Balancing
- Snapshot and Auto-Replication Scheduler
- E-mail Home
- Storage Virtualization
- Volume Cloning
- Volume Management
- Volume Snapshot



PS STORAGE STACK



PS Series storage arrays are stackable as multi-array system configurations for customized performance and capacity

TECHNICAL HIGHLIGHTS

Volumes	Up to 1,024
Snapshots	512 per volume /up to 10,000 total
Hosts accessing group	Up to 512
Host interface	Any standards-compliant iSCSI initiator
Controllers	2 SAS
Disk capacity	300 GB*; 10,000 RPM SAS
System capacity	4.8 TB**
Number of drives	16
I/Os per second	60,000
Memory (battery-backed)	2 GB
Gb network interfaces	3
	Copper (standard)
Sustained system bandwidth	300 MBps
Operating systems supported	Windows® 2000, Windows Server 2003, Windows XP, NetWare®, Linux, Solaris™, AIX®, HP-UX, Mac OS® X, VMware® ESX
Upgrade option	Can be online upgraded to PS3800XV or PS3900XV
Expansion option	Can be combined with other PS systems in a PS Storage Stack

RAID SUPPORT

Automatic RAID 5, RAID 10 and RAID 50 configuration

RELIABILITY

Redundant, hot-swappable controllers, power supplies/cooling fans, and disks
Mirrored write-back cache with 72-hour battery backup
Individual disk drive slot power control

ENCLOSURE MONITORING SYSTEM

Automatic spare configuration and utilization
SMART
Automatic bad block replacement
Auto-Stat Disk Monitoring System (ADMS) to monitor health of data on disk drives

MANAGEMENT INTERFACES

SNMP, telnet, SSH, HTTP, Web (SSL), host scripting
Serial console
Multi-administrator support

SECURITY

CHAP authentication
Access control for iSCSI and management interfaces

NOTIFICATION METHODS

SNMP traps, e-mail, syslog

POWER

AC voltage	100-240 VAC ±10% single phase
Frequency	47-63 Hz
Power factor	.98 (minimum)
Power consumption	530 VA (maximum)
Heat dissipation	1,700 BTU per hour (maximum)
Power supplies	Dual 450 W supplies

ENVIRONMENTAL

Temperature range	5 to 35 °C / 41 to 95 °F
Storage temperature	-30 to 60 °C / -22 to 140 °F
Altitude	-70 to 3,048 m operational / -305 to 12,192 m non-operational
Relative humidity	20 to 80% non-condensing operational / 5 to 95% non-condensing non-operational
Shock	30 G for 2 ms operational / 30 g for 10 ms 1/2 sin non-operational
Vibration	.1 G @ 10 to 100 Hz operational / Random 1.04 grms 2-200 Hz non-operational
Acoustics	Sound Power Operating: <5.8 db LpA @ 20 °C

PHYSICAL

Height	130 mm / 5.12 in / 3 EIA units
Width	482.6 mm / 19.0 in / 1EC Rack Compliant
Depth	551 mm / 21.7 in
Weight	35 kg / 77.6 lb (maximum configuration)

AGENCY APPROVALS

Safety standards	UL 60950, CSA 60950 EN 60950 (Europe), CB Scheme
Electromagnetic Compatibility (EMC)	EN 55022 Class A, CE Mark, EN 55024 Immunity, ITE, FCC Class A, VCCI Class A (Japan) AN/NZS 3548 Class A (Australia/New Zealand)
C-Tick Compliance	N 4292
BSMI	Taiwan

LIMITED WARRANTY

2 years telephone support: business hours 5x9
1 year software maintenance and updates
2 years hardware (return to factory, first 90 days advance replacement, 1 year battery, 5 years on disks)

SUPPORT PROGRAMS

Complete Care	24-hour priority online/telephone access, software maintenance and updates, next business day advance hardware replacement
Complete Care Plus	24-hour priority online/telephone access, software maintenance and updates, four hour onsite advance hardware replacement

*1 GB = 1,000,000,000 bytes, useable space may be less

¹Qualified for Microsoft Windows Server 2003

**1 TB = 1,000,000,000,000 bytes, useable space may be less

²Qualified for Microsoft Windows Server 2000 and 2003, Linux and Sun Solaris Operating Systems



9 Townsend West, Nashua, NH 03063
Tel 603.579.9762 / Fax 603.579.6910 / www.equallogic.com



HOWARD™

TECHNOLOGY SOLUTIONS



PS3800XV STORAGE ARRAY

Equipped with sixteen 15,000 RPM SAS disk drives, the PS3800XV delivers maximum I/Os per second, providing high performance storage suitable for the intense I/O workloads of enterprise transactional databases.

DATA SERVICES INCLUDE:

- Auto-Replication
- Automatic Load Balancing
- Auto-Snapshot Manager¹
- Auto-Stat Disk Monitoring System
- Volume Consistency Sets
- Multi-Path I/O²
- PS Group Manager
- Pooled and Tiered Storage
- RAID Load Balancing
- Snapshot and Auto-Replication Scheduler
- E-mail Home
- Storage Virtualization
- Volume Cloning
- Volume Management
- Volume Snapshot

For more information visit www.Howard.com or call us at 888.912.3151.

TECHNICAL HIGHLIGHTS

Volumes	Up to 1,024
Snapshots	512 per volume /up to 10,000 total
Hosts accessing group	Up to 512
Host interface	Any standards-compliant iSCSI initiator
Controllers	2 SAS
Disk capacity	146 GB*; 15,000 RPM SAS
System capacity	2.3 TB**
Number of drives	16
I/Os per second	60,000
Memory (battery-backed)	2 GB
Gb network interfaces	3
	Copper (standard)
Sustained system bandwidth	300 MBps
Operating systems supported	Windows® 2000, Windows Server 2003, Windows XP, NetWare®, Linux, Solaris™, AIX®, HP-UX, Mac OS® X, VMware® ESX
Upgrade option	Can be online upgraded to PS3900XV
Expansion option	Can be combined with other PS systems in a PS Storage Stack

RAID SUPPORT

Automatic RAID 5, RAID 10 and RAID 50 configuration

RELIABILITY

Redundant, hot-swappable controllers, power supplies/cooling fans, and disks
Mirrored write-back cache with 72-hour battery backup
Individual disk drive slot power control

ENCLOSURE MONITORING SYSTEM

Automatic spare configuration and utilization

SMART

Automatic bad block replacement
Auto-Stat Disk Monitoring System (ADMS) to monitor health of data on disk drives

MANAGEMENT INTERFACES

SNMP, telnet, SSH, HTTP, Web (SSL), host scripting
Serial console
Multi-administrator support

SECURITY

CHAP authentication
Access control for iSCSI and management interfaces

NOTIFICATION METHODS

SNMP traps, e-mail, syslog

POWER

AC voltage	100-240 VAC ±10% single phase
Frequency	47-63 Hz
Power factor	.98 (minimum)
Power consumption	530 VA (maximum)
Heat dissipation	1,700 BTU per hour (maximum)
Power supplies	Dual 450 W supplies


ENVIRONMENTAL

Temperature range	5 to 35 °C / 41 to 95 °F
Storage temperature	-30 to 60 °C / -22 to 140 °F
Altitude	-70 to 3,048 m operational / -305 to 12,192 m non-operational
Relative humidity	20 to 80% non-condensing operational / 5 to 95% non-condensing non-operational
Shock	30 G for 2 ms operational / 30 g 10 ms 1/2 sin non-operational
Vibration	.1 G @ 10 to 100 Hz operational / Random 1.04 grms 2-200 Hz non-operational
Acoustics	Sound Power Operating: <5.8 db LpA @ 20 °C

PHYSICAL

Height	130 mm / 5.12 in / 3 EIA units
Width	482.6 mm / 19.0 in / 1EC Rack Compliant
Depth	551 mm / 21.7 in
Weight	35 kg / 77.6 lb (maximum configuration)

AGENCY APPROVALS

Safety standards	UL 60950, CSA 60950 EN 60950 (Europe), CB Scheme
Electromagnetic Compatibility (EMC)	EN 55022 Class A, CE Mark, EN 55024 Immunity, ITE, FCC Class A, VCCI Class A (Japan) AN/NZS 3548 Class A (Australia/New Zealand)
C-Tick Compliance	 N 4292
BSMI	Taiwan

LIMITED WARRANTY

2 years telephone support: business hours 5x9
1 year software maintenance and updates
2 years hardware (return to factory, first 90 days advance replacement, 1 year battery, 5 years on disks)

SUPPORT PROGRAMS

Complete Care	24-hour priority online/telephone access, software maintenance and updates, next business day advance hardware replacement
Complete Care Plus	24-hour priority online/telephone access, software maintenance and updates, four hour onsite advance hardware replacement

*1 GB = 1,000,000,000 bytes, useable space may be less

¹Qualified for Microsoft Windows Server 2003

**1 TB = 1,000,000,000,000 bytes, useable space may be less

²Qualified for Microsoft Windows Server 2000 and 2003, Linux and Sun Solaris Operating Systems

HOWARD™
TECHNOLOGY SOLUTIONS



PS STORAGE STACK



PS Series storage arrays are stackable as multi-array system configurations for customized performance and capacity



9 Townsend West, Nashua, NH 03063
Tel 603.579.9762 / Fax 603.579.6910 / www.equallogic.com

HOWARD™

TECHNOLOGY SOLUTIONS



PS3900XV STORAGE ARRAY

Equipped with sixteen 15,000 RPM SAS disk drives, the PS3900XV delivers maximum I/Os per second, providing high performance storage suitable for the intense I/O workloads of enterprise transactional databases.

DATA SERVICES INCLUDE:

- Auto-Replication
- Automatic Load Balancing
- Auto-Snapshot Manager¹
- Auto-Stat Disk Monitoring System
- Volume Consistency Sets
- Multi-Path I/O²
- PS Group Manager
- Pooled and Tiered Storage
- RAID Load Balancing
- Snapshot and Auto-Replication Scheduler
- E-mail Home
- Storage Virtualization
- Volume Cloning
- Volume Management
- Volume Snapshot

For more information visit www.Howard.com or call us at 888.912.3151.

TECHNICAL HIGHLIGHTS

Volumes	Up to 1,024
Snapshots	512 per volume /up to 10,000 total
Hosts accessing group	Up to 512
Host interface	Any standards-compliant iSCSI initiator
Controllers	2 SAS
Disk capacity	300 GB*; 15,000 RPM SAS
System capacity	4.8 TB**
Number of drives	16
I/Os per second	60,000
Memory (battery-backed)	2 GB
Gb network interfaces	3
	Copper (standard)
Sustained system bandwidth	300 MBps
Operating systems supported	Windows® 2000, Windows Server 2003, Windows XP, NetWare®, Linux, Solaris™, AIX®, HP-UX, Mac OS® X, VMware® ESX
Expansion option	Can be combined with other PS systems in a PS Storage Stack

RAID SUPPORT

Automatic RAID 5, RAID 10 and RAID 50 configuration

RELIABILITY

Redundant, hot-swappable controllers, power supplies/cooling fans, and disks
Mirrored write-back cache with 72-hour battery backup
Individual disk drive slot power control

ENCLOSURE MONITORING SYSTEM

Automatic spare configuration and utilization

SMART

Automatic bad block replacement
Auto-Stat Disk Monitoring System (ADMS) to monitor health of data on disk drives

MANAGEMENT INTERFACES

SNMP, telnet, SSH, HTTP, Web (SSL), host scripting
Serial console
Multi-administrator support

SECURITY

CHAP authentication
Access control for iSCSI and management interfaces

NOTIFICATION METHODS

SNMP traps, e-mail, syslog

POWER

AC voltage	100-240 VAC ±10% single phase
Frequency	47-63 Hz
Power factor	.98 (minimum)
Power consumption	530 VA (maximum)
Heat dissipation	1,700 BTU per hour (maximum)
Power supplies	Dual 450 W

ENVIRONMENTAL

Temperature range	5 to 35 °C / 41 to 95 °F
Storage temperature	-30 to 60 °C / -22 to 140 °F
Altitude	-70 to 3,048 m operational / -305 to 12,192 m non-operational
Relative humidity	20 to 80% non-condensing operational / 5 to 95% non-condensing non-operational
Shock	30 G for 2 ms operational / 30 g 10 ms 1/2 sin non-operational
Vibration	.1 G @ 10 to 100 Hz operational / Random 1.04 grms 2-200 Hz non-operational
Acoustics	Sound Power Operating: <5.8 db LpA @ 20 °C

PHYSICAL

Height	130 mm / 5.12 in / 3 EIA units
Width	482.6 mm / 19.0 in / 1EC Rack Compliant
Depth	551 mm / 21.7 in
Weight	35 kg / 77.6 lb (maximum configuration)

AGENCY APPROVALS

Safety standards	UL 60950, CSA 60950 EN 60950 (Europe), CB Scheme
Electromagnetic Compatibility (EMC)	EN 55022 Class A, CE Mark, EN 55024 Immunity, ITE, FCC Class A, VCCI Class A (Japan) AN/NZS 3548 Class A (Australia/New Zealand)

C-Tick Compliance



BSMI

Taiwan

LIMITED WARRANTY

2 years telephone support: business hours 5x9
1 year software maintenance and updates
2 years hardware (return to factory, first 90 days advance replacement, 1 year battery, 5 years on disks)

SUPPORT PROGRAMS

Complete Care	24-hour priority online/telephone access, software maintenance and updates, next business day advance hardware replacement
Complete Care Plus	24-hour priority online/telephone access, software maintenance and updates, four hour onsite advance hardware replacement

*1 GB = 1,000,000,000 bytes, useable space may be less

¹Qualified for Microsoft Windows Server 2003

**1 TB = 1,000,000,000,000 bytes, useable space may be less

²Qualified for Microsoft Windows Server 2000 and 2003, Linux and Sun Solaris Operating Systems

HOWARD™
TECHNOLOGY SOLUTIONS



PS STORAGE STACK



PS Series storage arrays are stackable as multi-array system configurations for customized performance and capacity



9 Townsend West, Nashua, NH 03063
Tel 603.579.9762 / Fax 603.579.6910 / www.equallogic.com



For more information visit www.Howard.com or call us at 888.912.3151.



PS STORAGE STACK

The PS Storage Stack scales data management flexibility by combining multiple PS Series arrays in a single SAN. This configuration can be optimized to meet any service level and cost requirements.

DATA SERVICES INCLUDE:

- Auto-Replication
- Automatic Load Balancing
- Auto-Snapshot Manager¹
- Auto-Stat Disk Monitoring System
- Volume Consistency Sets
- Multi-Path I/O²
- PS Group Manager
- Pooled and Tiered Storage
- RAID Load Balancing
- Snapshot and Auto-Replication Scheduler
- E-mail Home
- Storage Virtualization
- Volume Cloning
- Volume Management
- Volume Snapshot

TECHNICAL HIGHLIGHTS

Volumes	Up to 1,024
Snapshots	512 per volume /up to 10,000 total
Hosts accessing group	Up to 512
Host interface	Any standards-compliant iSCSI initiator
Controllers	2 – 16
Disk capacity	GB* SATA options: 250, 500, 750 GB SAS options: 146, 300
System capacity	3.5 – 84 TB**
Number of drives	14 – 112
I/Os per second	120,000 – 480,000
Memory (battery-backed)	2 – 16 GB
Gb network interfaces	3 – 24
Sustained system bandwidth	280 – 2,600 MBps
Operating systems supported	Windows® 2000, Windows Server 2003, Windows XP, NetWare®, Linux, Solaris™, AIX®, HP-UX, Mac OS® X, VMware® ESX

RAID SUPPORT

Automatic RAID 5, RAID 10 and RAID 50 configuration

RELIABILITY

Redundant, hot-swappable controllers, power supplies/cooling fans, and disks
Mirrored write-back cache with 72-hour battery backup
Individual disk drive slot power control

ENCLOSURE MONITORING SYSTEM

Automatic spare configuration and utilization

SMART

Automatic bad block replacement
Auto-Stat Disk Monitoring System (ADMS) to monitor health of data on disk drives

MANAGEMENT INTERFACES

SNMP, telnet, SSH, HTTP, Web (SSL), host scripting
Serial console
Multi-administrator support

SECURITY

CHAP authentication
Access control for iSCSI and management interfaces

NOTIFICATION METHODS

SNMP traps, e-mail, syslog

POWER

Input voltage/power	100-240 VAC (auto-sensing) / 1,200 – 4,800 VA
Input current	10 – 40 A (maximum) @ 115 V
Input frequency	50-60 Hz
Power supplies	4 – 16,450 W
Power consumption	1,000 – 4,800 W

ENVIRONMENTAL

Temperature range	5 to 35 °C / 41 to 95 °F
Storage temperature	-30 to 60 °C / -22 to 140 °F
Altitude	-70 to 3,048 m operational / -305 to 12,192 m non-operational
Relative humidity	20 to 80% non-condensing operational / 5 to 95% non-condensing non-operational
Thermal output	4,000 – 16,000 BTU per hour / 4,800 W (maximum configuration)

PHYSICAL

Height	130 mm / 5.12 in / 3 EIA units
Width	482.6 mm / 19.0 in / 1EC Rack Compliant
Depth	551 mm / 21.7 in
Weight	35 kg / 77.6 lb (maximum configuration)

AGENCY APPROVALS

Safety standards	UL 60950, CSA 60950 EN 60950 (Europe), CB Scheme
Electromagnetic Compatibility (EMC)	EN 55022 Class A, CE Mark, EN 55024 Immunity, ITE, FCC Class A, VCCI Class A (Japan) AN/NZS 3548 Class A (Australia/New Zealand)

C-Tick Compliance



N 4292

LIMITED WARRANTY

2 years telephone support: business hours 5x9
1 year software maintenance and updates
2 years hardware (return to factory, first 90 days advance replacement, 1 year battery, 5 years on disks)

SUPPORT PROGRAMS

Complete Care	24-hour priority online/telephone access, software maintenance and updates, next business day advance hardware replacement
Complete Care Plus	24-hour priority online/telephone access, software maintenance and updates, four hour onsite advance hardware replacement

¹ 1 GB = 1,000,000,000 bytes, useable space may be less

² Qualified for Microsoft Windows Server 2003

¹ 1 TB = 1,000,000,000,000 bytes, useable space may be less

² Qualified for Microsoft Windows Server 2000 and 2003, Linux and Sun Solaris Operating Systems



9 Townsend West, Nashua, NH 03063
Tel 603.579.9762 / Fax 603.579.6910 / www.equallogic.com