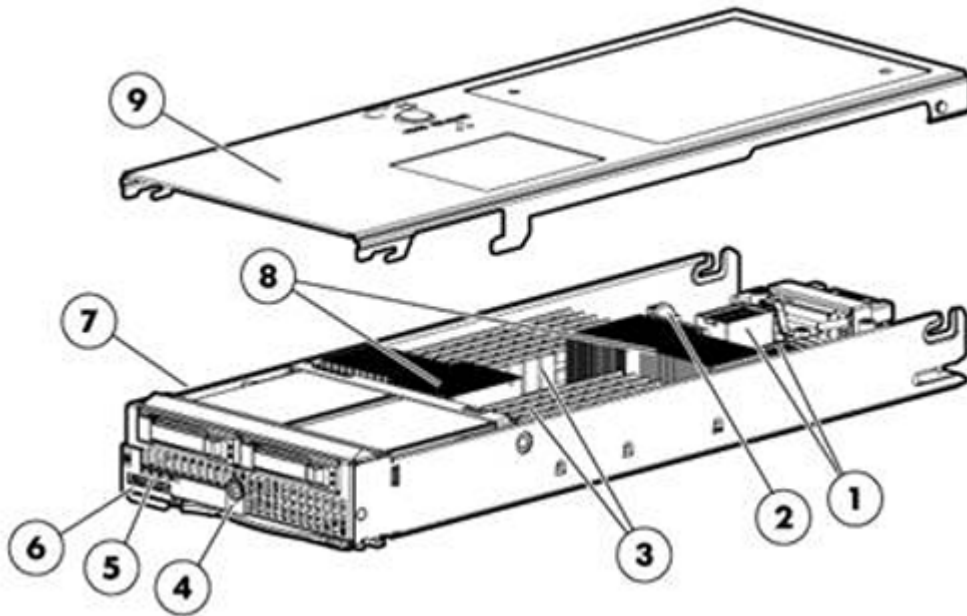


### Overview

Have your storage requirements rapidly increased? Do you need a flexible and powerful way to manage and control this growth?

HP X1800sb G2 Network Storage Blade is a flexible storage server solution for BladeSystem environments. Combine the X1800sb G2 with the D2200sb Storage Blade to enable file serving and iSCSI shared storage inside the BladeSystem enclosure.

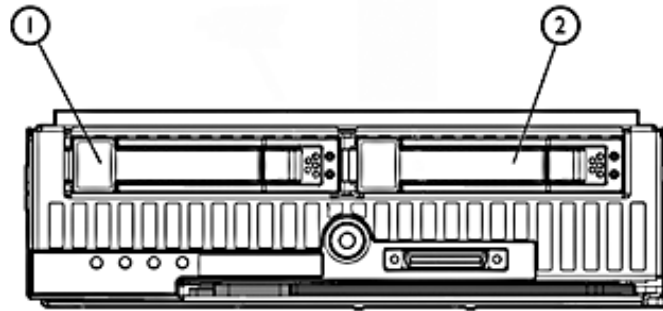
The flexibility of the X1800sb G2 extends to external storage as well. The X1800sb G2 can also be used as a low cost SAN gateway to provide consolidated file-serving access to FC, SAS, or iSCSI SANs.



#### Side View

1. Two (2) mezzanine I/O expansion slots
2. Internal USB connector
3. The X1800sb G2 has 6GB (3 x 2GB) PC3-10600R pre-installed
4. HP Smart Array P410i Controller
5. 2 x 146GB SFF SAS 15k hot plug hard drives with Microsoft Windows Storage Server 2008 R2, Standard X64 Edition pre-installed (in a RAID 1 configuration)
6. Local I/O Connector
7. Internal SD card slot
8. One Quad-Core Intel® Xeon® Processors E5640 (2.66 GHz, 12MB L3 Cache, 80w) pre-installed
9. Access Panel

### Overview



**Front View**

- 1-2 2 x 146GB SFF SAS 15k hot plug hard drives with Microsoft Windows Storage Server 2008 R2, Standard X64 Edition pre-installed (in a RAID 1 configuration)

### Features and Benefits

#### Connect the X1800sb G2 to internal or external storage

1. Pair the X1800sb G2 with the D2200sb storage blade and create iSCSI shared storage and file serving inside the BladeSystem enclosure.
2. Or use the X1800sb G2 as an affordable gateway to external FC, SAS, or iSCSI storage.

#### Go from out-of-the-box to sharing storage in minutes, not hours.

Built on the ProLiant BL460c G7 Server Blade, the X1800sb G2 comes pre-installed with Microsoft® Windows Storage Server 2008 R2 Standard x64 Edition operating system with Microsoft iSCSI Software Target and HP Automated Storage Manager Software (HP ASM) included.

#### Optimized file services using internal or external storage

In a Windows (SMB/CIFS) environment, there's no better way to serve files. Windows Storage Server 2008 R2 delivers better file serving performance than standard Windows Server 2008 R2, has exclusive features like Single Instance Storage (SIS) file deduplication, and supports Volume Shadow Copy Service snapshots. In mixed environments, you get the flexibility of heterogeneous support for additional protocols like NFS, HTTP, FTP, and WebDAV. File serving inside the BladeSystem enclosure is available when the X1800sb G2 is paired with the D2200sb Storage Blade. The X1800sb G2 can also be used as an affordable SAN gateway to provide consolidated file-service access to FC, SAS, or iSCSI SANs.

#### Internal shared storage for BladeSystem application servers

Pair the X1800sb G2 with the D2200sb Storage Blade, and you not only have file services, but you also have an internal iSCSI shared storage solution. Managed through a single interface, the X1800sb G2 provides shared application storage (iSCSI SAN), file serving (NAS), and data protection inside the Blade System enclosure. The HP Automated Storage Manager is included, providing an 'application-centric' management tool that hides storage complexity.

HP Automated Storage Manager (HP ASM): Create, migrate, manage, and protect shared storage without the need for storage expertise using HP ASM Software, which is included with all X1000 Network Storage Systems. HP ASM is designed for IT generalists and is like getting a storage expert in the box. It includes tools to quickly and easily migrate and manage file and iSCSI data using automated best practice settings, and you can enable optional data protection features within HP ASM by installing HP Data Protector Express Software, and/or HP Storage Mirroring Software.

Integrated data protection: Provides an easy mechanism to manage disk based snapshots for easy rollback, integrated data protection software for offsite and archive, hot-plug disk drives (RAID), and hardware redundancy. Data can also be replicated to another system for enhanced disaster recovery.

#### Seamless integration into your Windows environment

It's running Windows, so it integrates natively into your Active Directory (AD) and Distributed File System (DFS) environments, runs your favorite antivirus, backup, and storage management applications, and the Microsoft Management Console (MMC) user interface has a familiar look and feel.

#### HP storage management enhancements

Microsoft Management Console (MMC)-based user interface (also accessible via HTTPS)

- Features the familiar look and feel of the Microsoft Management Console (MMC). Access to HP tools such as ACU are centralized on the HP Storage Server Management console.

HP Rapid Start-up Wizard: Simplifies and accelerates new device deployment by walking you through basic system settings step-by-step.

### Features and Benefits

<b>Remote and Enterprise HW management</b>	Because the X1800sb G2 is built on the BL460c G7 Server Blade, you can manage and troubleshoot from outside the office at both the operating system level (with Remote Desktop or HTTPS) and at the platform level (using HP ProLiant Onboard Administrator with iLO Advanced for BladeSystem). The X1800sb G2 Network Storage Blade can also be managed by HP Systems Insight Manager (HP SIM).
<b>Warranty</b>	Industry standard HP BladeSystem hardware is backed by a 3/3/3 hardware warranty and 1 year software support.
<b>File/print serving (NAS)</b>	The X1800sb G2 is tuned for faster file serving performance (beyond standard Windows servers). Single Instance Storage (SIS) deduplication can improve capacity utilization by 35% or more by eliminating duplicate files within shared volumes. Full text search capabilities increase the speed of end-user search.
<b>Intelligent storage services</b>	Make more efficient use of storage space using the file deduplicating Single-instance Storage (SIS) feature and enjoy the benefits of other storage-specific tools like Indexed Search, Quotas, File Screening, Storage Reporting, and Distributed File System (DFS) Replication.

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**Operating System pre-installed** Microsoft Windows Storage Server 2008 R2, Standard x64 Edition

- 64-bit processing (compatible with 32-bit applications)
- Optimized for File Serving: Up to 20% faster file serving performance than a general-purpose Windows Server 2008 installation on the same hardware.
- HP-enhanced File Server Management Console: Features the familiar look and feel of the Microsoft Management Console (MMC).
- HP Rapid Startup: Simplifies and accelerates new device deployment by presenting basic system settings on your first boot.
- Single-instance Storage (SIS): Recovers up to 35% of disk space by deduplicating files and reducing the amount of redundant data stored. Identifies identical files, stores a single copy of the file in a central repository, and replaces the files with pointers to the file in the SIS common store.
- Search Enhancements: Indexing Service extracts the information from a set of documents and organizes it in a way that makes it quick and easy to access that information through the Search function for computers running Windows 2000, Windows XP or Windows Vista.
- File Server Resource Manager (FSRM): Provides both on-demand and scheduled reports detailing storage use, allows administrators to create and manage folder and volume quotas, and permits both name-based screening of files and allowing/disallowing file creation on specified folder trees.
- File Classification Infrastructure: provides insight into your data to help you manage your data more effectively, reduce costs and mitigate risks by providing a built-in solution for file classification allowing administrators to automate manual processes with predefined policies based on the data's business value. Also provided is an extensible infrastructure upon which ISVs can build end-to-end solutions that enable organizations to perform advanced classification and data management.
- Distributed File System (DFS) Management Console: Updated DFS namespace failover, failback and prioritization controls.
- Distributed File System Replication (DFS-R): State-based, multi-master replication engine that supports replication scheduling and bandwidth throttling. DFS-R uses a new compression algorithm that efficiently updates files over limited bandwidth networks by replicating only the changes needed to ensure global file consistency.
- Full support of Volume Shadow Copy Service, which creates point-in-time copies of files and folders at predetermined time intervals that can then be accessed from client computers.
- Unlimited Client Access Licenses (CALs) included
- Microsoft Services for Network File System (NFS)

### Features and Benefits

- Simultaneous support for multiple file serving protocols, including SMB/CIFS, NFS, HTTP, FTP, and WebDAV
- Print Management Console: Manage multiple printers (license for unlimited printer support) from a single console, whether locally or over the WAN
- Support for any number of SATA or SAS drives and multiple network ports
- Support for up to 32 GB of SDRAM

Window Storage Server Roles	X1800sb G2	X3800sb G2
Active Directory Certificate Services	No	No
Active Directory Domain Services	No	No
Active Directory Federation Services	No	No
Active Directory Lightweight Directory Services	Allowed	Allowed
Active Directory Management Services	No	No
Application Server	No	No
DHCP Server	Allowed	Allowed
DNS Server	No	No
FAX Server	Enabled	Enabled
File Services	Enabled	Enabled
Hyper-V	No	No
Network Policy and Access Services	No	No
Print Services	Enabled	Enabled
Terminal Services	No	No
UDDI Services	No	No
Web Server (IIS)	Enabled	Enabled
Windows Deployment Services	No	No

### Microsoft iSCSI Software Target

Microsoft iSCSI Software Target v3.3

- Compliant with iSCSI industry standards and compatible with industry standard iSCSI initiators. Interoperability has been verified for:
  - Microsoft iSCSI Software Initiator 2.07 and 2.08 in Windows Server 2003.
  - Microsoft iSCSI Software Initiator in Windows Server 2008 SP1 and SP2.
  - Microsoft iSCSI Software Initiator in Windows Server 2008 R2.
  - Microsoft iSCSI Software Initiator in Windows Vista.
  - Microsoft iSCSI Software Initiator in Windows 7.
  - Qlogic initiator QLE4062C-SP, firmware 3.00.01.24.
  - RedHat Enterprise Linux iSCSI Initiator version 5.x.
  - SuSE Enterprise Linux iSCSI Initiator version 10.x.

### Support

HP is the customer's primary contact for the resolution of all iSCSI initiator/iSCSI target interoperability issues. Microsoft is committed to working with HP to resolve interoperability issues involving the Microsoft iSCSI Software Target, but Microsoft is not responsible for resolving any issues caused by non-Microsoft iSCSI initiators

- IETF-ratified iSCSI specification compliant
- IPv6 support (**NOTE: HP ASM does not support IPv6**)

### Features and Benefits

- iSNS integration
- IPsec encryption
- CHAP authentication
- Seamless integration into Microsoft Management Console (MMC) user interface
- LUN resizing
- IP Take-Over support
- Multi-Path I/O (MPIO) support
- Application-aware snapshots with Microsoft Volume Shadow Copy Service (VSS)  
**NOTE:** Limit of 512 snapshots per independent iSCSI/Application volume and 64 snapshots for file share volumes. If iSCSI LUNs and file shares are on a common volume the iSCSI snapshot limit is 448.
- Compatible with backup applications certified with Microsoft Windows Server 2008 and Server 2008 R2
- Sample Application Server Compatibility: Microsoft Exchange 2000, 2003, and 2007 Servers; Microsoft SQL Server 2000, 2005, and 2008
- Sample Virtual Environment Compatibility: Microsoft Hyper-V, VMWare, Xen

### HP Automated Storage Manager (HP ASM) Software

The HP Automated Storage Manager Software is included with the X1800sb G2, and can be used when the X1800sb G2 is paired with a D2200sb Storage Blade. This easy-to-use, integrated storage management tool works from an application point-of-view and can help you orchestrate the many aspects of your storage environment---even if you lack storage expertise. It's like having your own storage expert in the box.

- File Share creation wizard for CIFS or NFS shares with storage allocation, directory quota management, and scheduled snapshots.
- Quota monitoring and alerting per share or application.
- Remote management via Microsoft Internet Explorer or Terminal Services.
- Best practice and advanced dialog improvements to ASM wizards grant more control to those with more storage management experience.
- Support for setup and management of both internal storage as well as supported direct attached MSA storage enclosures.
- Supports management of tiered storage environments where both SAS and SATA hard drives are attached to the D2200sb either internally or in externally-attached HP P2000/D2000 enclosures.
- You can use ASM to specify a dedicated, primary network--plus a secondary subnet--for your IP-based storage traffic.
- Disaster recovery tools work in concert with backup applications to preserve storage subsystem settings in case they need restored after a system rebuild.
- Provides end-to-end management and provisioning of iSCSI storage for non-clustered 32-bit and 64-bit Windows Server 2003 or Windows Server 2008 hosts (including derivatives like Windows Small Business Server 2008 and Windows Essential Business Server 2008) from the iSCSI Target all the way through to the host.
- Provides management and provisioning of iSCSI storage for standards-compliant non-Windows iSCSI initiators such as VMWare, Linux, etc.
- Application data hosting and migration wizard using HP and Microsoft 'Best Practice' storage provisioning for Microsoft Exchange 2003/2007 Storage Groups and Microsoft SQL Server 2000/2005/2008\* databases (\*SQL Server 2008 support requires installation of "SQL Server 2005 Backward Compatibility" option; file stream functionality not supported).
- Application-level capacity provisioning and online growth for shares, SQL Server and Exchange. SQL Server support includes data file and log directory provisioning and Exchange support includes Mailstore, Publicstore and log directory provisioning.
- Application data hosting and iSCSI Setup wizard for other 'User Defined' Application (Oracle, mySQL,

### Features and Benefits

- VMware ESX, etc...)
- Data protection policy assignment (snapshots, backup, and HP Storage Mirroring replication) integrated into application migration and share creation wizards for data hosted on the system. (Requires HP Data Protector Express Software and/or HP Storage Mirroring Software)
- Data Protector Express Virtual Library (D2D) device provisioning and space management as well as support for Data Protector Express D2D2Any add-on option. (Requires HP Data Protector Express Software)
- Integration with HP Storage Mirroring Software to accommodate asynchronous replication of file and block data to another system. (Requires HP Storage Mirroring Software)
- ASM agents now support domain servers (including Windows Server 2008, Small Business Server 2003 and Small Business Server 2008) as application host machines.

### HP ASM Agent Application & OS Support Matrix

	Microsoft Windows Server 2003 SP1	Microsoft Windows Small Business Server 2003	Microsoft Windows Server 2008	Microsoft Windows Essential Business Server 2008
Microsoft Exchange 2003 SP1	•	•		
Microsoft Exchange 2007	•*	•*	•*	•*
Microsoft SQL Server 2000 SP4	•	•		
Microsoft SQL Server 2005 SP2	•	•	•	•
Microsoft SQL Server 2008	•**	•**	•**	•**

\* Exchange 2007 is only supported on 64-bit Operating Systems

\*\* SQL Server 2008 support requires installation of "SQL Server 2005 Backward Compatibility" option; file stream functionality not supported

### HP ASM Feature Support Matrix

	Microsoft Windows Server 2003 SP1	Microsoft Windows Small Business Server 2003	Microsoft Windows Server 2008	Microsoft Windows Essential Business Server 2008
Data Migration	•	•	•	•
Replication (HP Storage Mirroring Software)	•	•	•	•
Backup (HP Data Protector Express Software)	•	•	•	•
Virtual Library (HP Data Protector Express Software)	•	•	•***	•***
Application-aware snapshots	•	•	•	•

\*\*\* Utilizing Virtual Library (D2D) functionality requires HP Data Protector Express Software v4.x to support Windows Server 2008



### SAN Compatibility

#### HP X1800sb G2 Network Storage Blade

**BV872A**

Server + Processor	<ul style="list-style-type: none"> <li>● HP ProLiant BL460c G7 Server Blade with one Intel® Xeon® processor E5640 (2.66 GHz, 12MB L3 Cache, 80w) installed</li> <li><b>NOTE:</b> All BL460c G7 options are supported by the X1800sb G2 and will ship as separate components unless otherwise noted.</li> </ul>
Memory	<ul style="list-style-type: none"> <li>● 6GB (3 x 2GB) PC3-10600R</li> </ul>
Storage Controller	<ul style="list-style-type: none"> <li>● HP Smart Array P410i Controller (RAID 0/1)</li> </ul>
Internal Drive Support	<ul style="list-style-type: none"> <li>● 2 x 146GB SFF SAS 15k hot plug hard drives with Microsoft Windows Storage Server 2008 R2, Standard X64 Edition pre-installed (in a RAID 1 configuration)</li> </ul>
Network Controller	<ul style="list-style-type: none"> <li>● Integrated NC553i Dual Port FlexFabric 10GbE Converged Network Adapter</li> <li><b>NOTE:</b> FlexFabric capability requires the use of an HP Virtual Connect Flex-Fabric module. Learn more at: <a href="http://www.hp.com/go/virtualconnect">www.hp.com/go/virtualconnect</a>.</li> <li>● One (1) additional 10/100 NIC dedicated to iLO 3 Management</li> </ul>
Mezzanine Support	<ul style="list-style-type: none"> <li>● Two (2) I/O expansion mezzanine slots</li> <li>● Supports up to (2) mezzanine cards                             <ul style="list-style-type: none"> <li>○ Dual-Port Fibre Channel Mezzanine options for SAN connectivity (Choice of Emulex or QLogic)</li> <li>○ iSCSI Ethernet mezzanine option for optimized iSCSI connectivity</li> <li>○ Ethernet server adapter mezzanine options for additional network ports</li> <li>○ 4X DDR InfiniBand (IB) Mezzanine (20 Gb/s) options for low latency server interconnectivity (based on Mellanox technology)</li> </ul> </li> </ul>
Host Bus Adapter (HBA) Support	<ul style="list-style-type: none"> <li>● HBA selection is left as your choice based on existing infrastructure and/or desired array support.</li> </ul>
Form Factor	<ul style="list-style-type: none"> <li>● The X1800sb G2 is based on the HP ProLiant BL460c G7, which is a half-height server blade that plugs into the HP BladeSystem c3000 and c7000 enclosures</li> </ul>
Management	<ul style="list-style-type: none"> <li>● HP ProLiant Onboard Administrator (powered by the Integrated Lights-Out 3 management processor) provides virtual KVM graphical remote console, virtual media, simplified server setup, and core server control functions out of the box.</li> <li>● Unlock the full capabilities of the HP ProLiant Onboard Administrator with iLO Advanced for BladeSystem to take advantage of capabilities such as boot and failure sequence replay, on-demand video record and playback, and multi-user console for up to four users. Learn more at: <a href="http://www.hp.com/go/iLO">www.hp.com/go/iLO</a></li> </ul>

#### Warranty and software support

##### Warranty

- The X1800sb G2 comes with a standard 3-3-3 warranty (3 years parts exchange, 3 years labor and 3 years onsite next business day response)

##### Software support

- One year of HP Software Support, standard 9x5 business hours (software technical support and software product and documentation updates).



### SAN Compatibility

#### **Optional Software to Enhance the X1800sb G2**

**HP Storage Mirroring Software** - HP Storage Mirroring offers a host-based application that performs remote copy over an IP LAN/WAN. Key features include asynchronous replication that can be scheduled to a fine granular level, Logical Unit Number (LUN), file or byte level. Other features include multiple replication configuration options including peer-to-peer and many-to-one. In addition, Storage Mirroring is a very cost effective disaster recovery alternative from one host to another within a LAN, storage center, or between direct attached storage in metro offices and regional centers. Additional configurations allow replication from small office environments to ensure business continuity without an outside IT staff.

For more information on HP Storage Mirroring Software:  
<http://h18006.www1.hp.com/products/storage/software/sm/>

**HP Data Protector software** - HP Data Protector software is enterprise data protection and disaster recovery, ensuring recovery from any disruption. Data Protector integrates a variety of techniques to eliminate backup and recovery windows. The capabilities to eliminate planned downtime range from online backup and backup of open files to zero-downtime, zero-impact backup. The software provides industry-leading instant recovery as well as several disaster recovery alternatives to eliminate unplanned downtime, allowing recovery of entire data centers in minutes.

Data Protector is enabling organizations to reduce costs by automating routine tasks to maximize the effectiveness of the data protection staff. For the price of an entry-level product, it provides the enterprise functionality customers need. Data Protector scales from single server to distributed enterprise, covering an extensive range of heterogeneous applications, operating environments and storage configurations with a single solution.

For more information on HP Data Protector:  
<http://h18006.www1.hp.com/products/storage/software/dataprotector/index.html>

**HP Data Protector Express Software** - HP Data Protector Express is easy-to-use data protection and disaster recovery software. It is designed for smaller environments where ease of installation, use, and installation are needed. It enables backup to disk and/or tape of data stored on an X1000 Network Storage System and disaster recovery in the event of a serious incident. An X1000 Network Storage System can also act as the Backup Server and as a target for backup of data on other LAN connected machines or data protection can be integrated into an existing Data Protector Express installation.

Installing HP Data Protector Express on an HP X1000 Network Storage System enables data protection features within HP X1000 Automated Storage Manager Software (HP ASM), including backup of file shares or application stores using application-aware snapshots to tape, disk, or other removable media targets. See: <http://www.hp.com/go/simplestorage> for more information.

For more information on HP Data Protector Express Software:  
<http://www.hp.com/go/dataprotectorexpress>

**HP Storage Essentials NAS Manager Software** - Provides comprehensive Network Attached Storage (NAS) management capabilities for HP ProLiant Storage Server. Visualize your distributed HP NAS solutions and centrally manage their capacity, performance, events, and dependencies to ensure NAS availability and performance and unify SAN and NAS management. For more information on the complete line of HP Storage Essential products go to: [Storage Essentials - NAS Manager](#)

### Service and Support, HP Care Pack, and Warranty Information

#### Warranty

HP X1000 G2 Network Storage Systems come with a standard 3-3-3 warranty (3 years parts exchange, 3 years labor and 3 years onsite, next business day response). Software media is warranted to be free of physical defect for a period of 90 days from delivery.

**Services Included with the Product** One year of HP Software Support, standard 9x5 business hours (software advisory and remedial software telephone support, new version license rights, and media and documentation distribution service).

#### For increased uptime, productivity and ROI-HP Care Pack packaged services for Storage

These days, you need to get the most out of your storage investment-you can't afford not to. When you buy HP storage products and solutions, it's also a good time to think about what levels of service and support you may need. To help take the worry out of deploying, designing, maintaining, and managing your environment, we've designed a portfolio of service options that are as flexible, reliable and scalable as your storage. Unlike storage-only vendors, we take a holistic approach to your entire environment, bridging storage, servers, blades, software and network infrastructures with our HP Care Pack packaged services for Storage.

#### Protect your business beyond the warranty

When it comes to robustness and reliability, standard warranties on today's computing equipment have matured just as the technologies have matured. Good news on some fronts-but also a source of potential problems and subsequent consequences that come from depending on standard warranties alone. Standard warranty protects against product defects and some causes of downtime- but not the business. By using a standard approach to warranty uplifts, such as HP Care Pack Services, you can reduce downtime risks and be more certain of operational consistency for both mission-critical and standard business computing. Simply put, HP Care Pack Services normalize the warranty of combined products - helping you proactively guard against unplanned downtime.

#### Extending warranties with HP Care Pack Services

For cost-effective upgrading or extending your standard warranty, HP Care Pack Services offer a suite of standard reactive hardware and software support services that are sold separately, or combined as with our Support Plus and Support Plus 24 services. The portfolio also provides a combination of proactive and reactive services, such as Proactive 24 Service and Critical Service. In addition, with HP Proactive Select we offer an innovative approach to service delivery that gives you the flexibility to acquire the specific proactive services you need today, then add services as your needs evolve. HP Proactive Select offers a broad set of technical or per-event type service options - including server, storage, and network, SAN device, and software, environment, installation and education services. Services that you can mix and match depending on your specific requirements, from preliminary planning and equipment delivery to installation, configuration, integration, and testing, through every level of ongoing support. Our HP Care Pack packaged services for Storage assures help when you need it most. And for many products, post-warranty HP Care Pack Services are available when your original warranty has expired.

#### HP Storage Services: Offering reliability, flexibility and value-just like your storage

HP Storage Services offers a full spectrum of customer care, from technology support to complex migrations to complete completely managed services. HP Factory Express provides customization, integration and deployment services for turnkey solutions. HP Education offers flexible, comprehensive training on storage networking, disk storage systems, and storage software to help your IT staff get the most out of your investments. And HP Financial solutions extend innovative financing and asset management programs to cost-effective buy, manage and eventually retire your older equipment.

HP Storage Services, the trusted business technology experts who manage your technology in action, because when technology works, business works. <http://www.hp.com/services/storage>

**NOTE:** Care Pack Services availability may vary by product and country.

HP Care Pack Services are sold by HP and HP Authorized Service Partners

- Services for customers purchasing from HP or an enterprise reseller are quoted using HP order configuration tools.
- Customers purchasing from a commercial reseller can find HP Care Pack Services at <http://www.hp.com/go/lookuptool>

## Recommended HP Care Pack Services for optimal satisfaction with your HP product.

### Recommended Services **3-Year HP Support Plus 24**

For a higher return on your storage investment, HP Support Plus 24 provides integrated hardware and software support services designed specifically for your technology. Available 24x7, this 3-year combined reactive support option delivers onsite hardware support and over-the-phone software support around-the-clock. Leverage the full strength of HP Technology Services - customers can trust the services professionals at HP to work collaboratively with them, putting our strategic and technical know-how to work across their entire infrastructure.

- Improve uptime with responsive hardware and software services
- Enjoy consistent service coverage across geographically dispersed sites
- Update HP software at a predictable cost
- Increase customer satisfaction-with no interoperability gaps

<http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-6638EN.pdf>

### **HP Installation and Startup Service for X1000 G2/X3000 Storage Systems**

For smooth startup, HP Installation and Startup Service for X1000 G2/X3000 Storage Systems - provides deployment of your HP ProLiant Storage Server while helping you establish readily available access to and management of your critical data and applications. Leverage the full strength of HP Technology Services - customers can trust the services professionals at HP to work collaboratively with them, putting our strategic and technical know-how to work across their entire infrastructure.

- System installation and setup by a HP technical specialist
- Reduced implementation time and cost
- Verification prior to installation that all service prerequisites are met
- Availability of an HP service specialist to answer basic questions related to this service during the orientation session
- Potential expansion of the number of shares and hosts

<http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA2-6112ENL.pdf>

### **HP Proactive Select Service**

HP Proactive Select Service improves your IT performance and manageability through the use of cost effective flexible services. HP provides technical expertise and best practices to accelerate ROI of your technology investment. Selectable proactive services span a wide range of technology and process services - a flexible way to purchase proactive services that fit your particular environment and situation.

HP Proactive Select Service is technology agnostic and purchased in addition to your choice of underlying reactive support.

- Access to a list of flexible and customizable proactive service activities
- Enhance customers' in-house IT team with complementary assistance from HP
- Improved time to solution
- Reduce business risk and project costs by accessing HP specialists
- Simplify IT operational procedures by leveraging HP best practices

<http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA2-3842ENN.pdf>

### Service and Support, HP Care Pack, and Warranty Information

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#### Optional HP Care Pack Services that will enhance your HP product experience.

##### Optional Services

HP Entry Storage Data Migration Service for Windows

For customers who need to safely migrate Windows data within their TCP/IP networks with minimal impact to their operations:

You have a need to migrate data between Windows servers within your TCP/IP network. Or you have a need to migrate storage for your Windows servers. Or both. And you need to accomplish these migrations efficiently while minimizing risk at the same time.

HP Entry Storage Data Migration Service for Windows offers you a cost competitive and convenient way to accommodate data migration triggered by a need to refresh or consolidate storage, or to create different storage tiers. This service offers a migration cost in line with the costs of storage products in small and medium-sized storage environments. The service is delivered via a skilled HP service specialist with special consideration for data availability, integrity, and ongoing operational performance during the transfer process.

<http://h20195.www2.hp.com/v2/GetPDF.aspx/4AA2-4734ENW.pdf>

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##### eSupport

HP eSupport is a portfolio of technology-based services that assist you with managing your business environment - from the desktop to the data center.

##### Support Portal

The HP support portal provides one-stop access to the information, tools and services you need to manage the daily operations of your IT environment.

##### Features include:

- Access to self-solve tools (including search technical knowledge base)
- Efficient logging and tracking of support cases
- Collaboration with other business and IT professionals
- Download of patches and drivers
- Access to diagnostic tools
- Proactive notification of relevant information

Access to certain features of the support portal requires an HP service agreement. To access the support portal, visit: <http://www.hp.com/support>

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##### Customer Technical Training

Consider education as an integral part of your strategy to get the best return on investment for your HP storage solution. HP offers a variety of training courses on storage software, networking, archiving and disk storage systems. Our classes are available in many delivery modalities from traditional instructor-led courses at one of our 80 training centers worldwide to on-site training customized to your needs or online. [www.hp.com/learn/storage](http://www.hp.com/learn/storage)

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### Service and Support, HP Care Pack, and Warranty Information

#### **HP Services Awards**

HP Services continues to be recognized for service and support excellence by customers, partners, industry organizations and publications around the world. Recent honors and award reflect our services team's dedications, technical expertise, professionalism and uncompromising commitment to customer satisfaction. For a list of all our awards, please visit:

<http://h20219.www2.hp.com/services/cache/433028-0-0-225-121.htm>

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#### **Additional Services Information**

For more information about HP Care Pack Services for Storage, please visit:

<http://www.hp.com/services/storage>

If you have specific questions, contact your local HP representative. Contact information for a representative in your area can be found at "Contact HP" <http://www.hp.com>

### Product Configuration

NOTE: The steps outlined below are intended only as a guide for the options available. The X1800sb G2 is built on the ProLiant BL460c G7 server. All ProLiant BL460c G7 options are supported by the X1800sb G2 and will ship as separate components. HBA options listed below are available with optional factory-installation. For more information on BL460 G7 options and details on memory configuration, see the BL460c G7 QuickSpecs: [http://h18004.www1.hp.com/products/quickspecs/13706\\_div/13706\\_div.html](http://h18004.www1.hp.com/products/quickspecs/13706_div/13706_div.html)

### Step 1 - Order the HP X1800sb G2 Network Storage Blade for your BladeSystem c-Class enclosure.

#### HP X1800sb G2 Network Storage Blade

**BV872A\***

Server +Processor	Built on the HP ProLiant BL460c G7 Server Blade, with one Quad-Core Intel Processors E5640 (2.66 GHz, 12MB L3 Cache, 80w)
Memory	6GB (3x2GB) PC3-10600R
Operating System	Microsoft Windows Storage Server 2008 R2, Standard X64 Edition, pre-installed
Hard Drives	2 x 146GB SFF 6G SAS 15K HDDs (for mirrored OS image)
Form Factor	Half height c-Class blade

\*#OD1 -Factory Integration into c-Class enclosure

### Step 2 - If using the X1800sb G2 as an affordable gateway server, add optional HBAs delivered as separate components

<b>HP Fiber Channel</b>	Brocade 804 8Gb FC HBA for HP BladeSystem c-Class	590647-B21
<b>Mezzanine Options</b>	HP BLc Emulex LPe1205- 8Gb FC HBA for HP c-Class BladeSystem	456972-B21
	Emulex LPe1105 FC Dual Channel 4Gb, PCI-E-to-Fibre Channel Host Bus Adapter	403621-B21
	QLogic QMH2562 8Gb FC HBA for HP c-Class BladeSystem	451871-B21
	QLogic QMH2462 4Gb FC HBA for HP c-Class BladeSystem	403619-B21

### Step 3 - If pairing the X1800sb G2 with the D2200sb storage blade for file services and iSCSI shared storage inside the BladeSystem enclosure, add the D2200sb and hard drives to your order.

<b>D2200sb</b>	HP D2200sb Storage Blade	AP880A
	See the D2200sb Storage Blade QuickSpecs for supported hard drives: <a href="http://h18000.www1.hp.com/products/quickspecs/13714_div/13714_div.html">http://h18000.www1.hp.com/products/quickspecs/13714_div/13714_div.html</a>	

### Step 4 - Order a 2nd processor for the X1800sb G2

<b>2nd Processor</b>	HP BL460c G7 E5640 (2.66 GHz, 12MB L3 Cache, 80W, DDR3-1066, HT, Turbo 1/1/2/2) Kit	610861-B21
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### Product Configuration

#### Step 5 - Order additional memory for the X1800sb G2

<b>Additional memory options</b>	<b>Registered DIMMS (RDIMMs)</b>	
	HP 2GB (1x2GB) Dual Rank x8 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	500656-B21
	HP 4GB (1x4GB) Dual Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	500658-B21
	HP 4GB (1x4GB) Single Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	593339-B21
	HP 4GB (1x4GB) Single Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit	604504-B21
	HP 8GB (1x8GB) Dual Rank x4 PC3-10600 (DDR3-1333) Registered CAS-9 Memory Kit	500662-B21
	HP 8GB (1x8GB) Dual Rank x4 PC3L-10600 (DDR3-1333) Registered CAS-9 Low Power Memory Kit	604506-B21
	HP 16GB (1x16GB) Quad Rank x4 PC3-8500 (DDR3-1066) Registered CAS-7 Memory Kit	500666-B21

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For hard drives, 1 GB = 1 billion bytes. Actual formatted capacity is less.