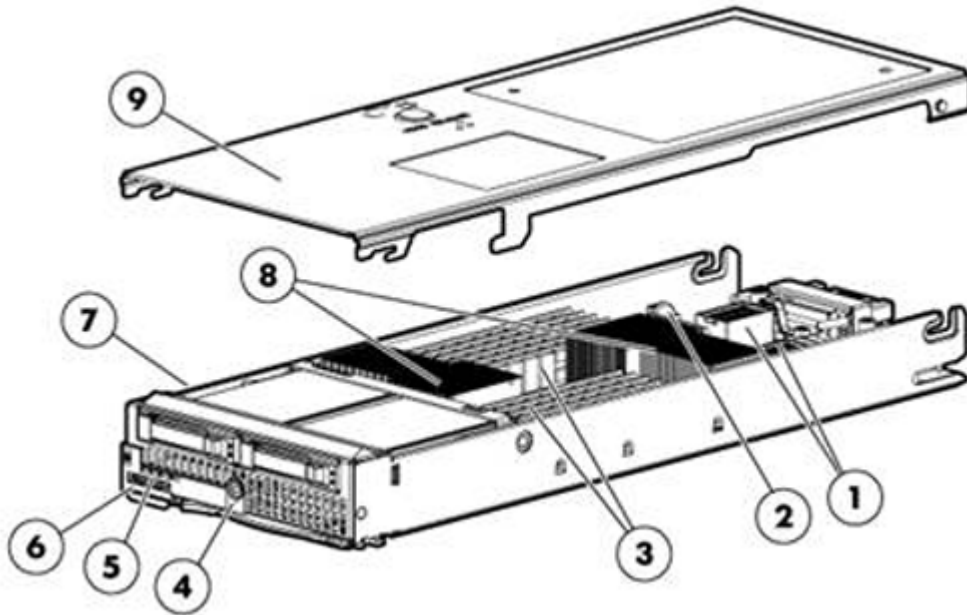


Overview

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

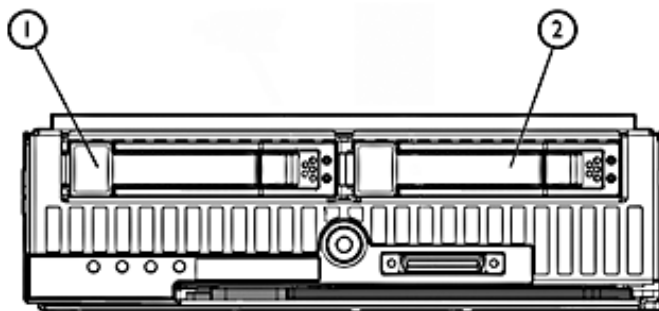
HP StorageWorks X1800sb Network Storage Blade is a flexible storage server solution for BladeSystem environments. Combine the X1800sb with the SB40c Storage Blade to enable file serving and iSCSI shared storage inside the BladeSystem enclosure. The flexibility of the X1800sb extends to external storage as well. The X1800sb 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 has 4GB (2 x 2GB) PC3-10600R pre-installed
4. HP Smart Array P410i Controller
5. 2 x 146GB SFF SAS 10k hot plug hard drives with Microsoft Windows Storage Server 2008, 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 L5506 (2.13 GHz, 60w) pre-installed
9. Access Panel

Overview



Front View

- 1-2 2 x 146GB SFF SAS 10k hot plug hard drives with Microsoft Windows Storage Server 2008, Standard X64 Edition pre-installed (in a RAID 1 configuration)

Models

HP StorageWorks X1800sb Network Storage Blade

AP805A

Features and Benefits

Connect the X1800sb to internal or external storage

1. Pair the X1800sb with the SB40c storage blade and create iSCSI shared storage and file serving inside the BladeSystem enclosure.
2. Or use the X1800sb 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 G6 Server Blade, the X1800sb comes pre-installed with Microsoft® Windows Storage Server 2008 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 delivers better file serving performance than standard Windows Server, 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 is paired with the SB40c Storage Blade. The X1800sb 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 with the SB40c 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 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 and 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

Remote and Enterprise HW management	Because the X1800sb is built on the BL460c G6 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 Network Storage Blade can also be managed by HP Systems Insight Manager (HP SIM).
Warranty	Industry standard HP BladeSystem hardware is backed by a 3/3/3 hardware warranty and 1 year software support.
File/print serving (NAS)	The X1800sb is tuned for faster file serving performance (beyond standard Windows servers). Single Instance Storage (SIS) deduplication can improve capacity utilization by 30% or more by eliminating duplicate files within shared volumes. Full text search capabilities increase the speed of end-user search.
Intelligent storage services	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.

Operating System pre-installed

Microsoft Windows Storage Server 2008, 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 StorageWorks 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 or Windows XP.
- 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.
- 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)
- 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

Features and Benefits

- Support for any number of SATA or SAS drives and multiple network ports
- Support for up to 32 GB of SDRAM

Microsoft iSCSI Software Target

- Compliant with iSCSI industry standards and compatible with industry standard iSCSI initiators. Interoperability has been verified for Windows 2000, Windows Server 2003, Windows Server 2008 (including Hyper-V), VMware ESX Server 3/3.5, SUSE Linux Enterprise Server 10, RedHat Enterprise Linux 5, and Qlogic 40xx series iSCSI hardware HBAs
- IETF-ratified iSCSI specification compliant
- IPv6 support (**NOTE: HP ASM does not support IPv6**)
- 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
- 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, and can be used when the X1800sb is paired with an SB40c 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 All-in-One Storage System either internally or in externally-attached HP StorageWorks MSA 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

Features and Benefits

- 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, VMware ESX, etc...)
- Data protection policy assignment (snapshots, backup, and HP StorageWorks 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 StorageWorks 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 StorageWorks Storage Mirroring Software to accommodate asynchronous replication of file and block data to another system. (Requires HP StorageWorks 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

Features and Benefits

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 StorageWorks X1800sb Network Storage Blade

AP805A

- | | |
|--------------------------------|--|
| Server + Processor | <ul style="list-style-type: none">● HP ProLiant BL460c G6 Server Blade with one Intel® Xeon® processor L5506 (2.13 GHz, 60 watts) installed● NOTE: All BL460c G6 options are supported by the X1800sb and will ship as separate components unless otherwise noted. |
| Memory | <ul style="list-style-type: none">● 4GB (2 x 2GB) PC3-10600R |
| Storage Controller | <ul style="list-style-type: none">● HP Smart Array P410i Controller (RAID 0/1) |
| Internal Drive Support | <ul style="list-style-type: none">● 2 x 146GB SFF SAS 10k hot plug hard drives with Microsoft Windows Storage Server 2008, Standard X64 Edition pre-installed (in a RAID 1 configuration) |
| Network Controller | <ul style="list-style-type: none">● Embedded NC532i Dual Port Flex-10 10GbE Multifunction Server Adapter● NOTE: Each port is autosensing 1 Gb/10Gb, and can interoperate with 1Gb HP BladeSystem c-Class interconnect components.● One (1) additional 10/100 server adapter dedicated to iLO 2 Management |
| Mezzanine Support | <ul style="list-style-type: none">● Two (2) I/O expansion mezzanine slots● Supports up to (2) mezzanine cards<ul style="list-style-type: none">○ Dual-Port Fibre Channel Mezzanine options for SAN connectivity (Choice of Emulex or QLogic)○ iSCSI Ethernet mezzanine option for optimized iSCSI connectivity○ Ethernet server adapter mezzanine options for additional network ports○ 4X DDR InfiniBand (IB) Mezzanine (20 Gb/s) options for low latency server interconnectivity (based on Mellanox technology) |
| Host Bus Adapter (HBA) Support | <ul style="list-style-type: none">● HBA selection is left as your choice based on existing infrastructure and/or desired array support. |

NOTE: The following options are available factory-integrated:

HP NC512m Dual Port 10GbE Multifunction BL-c Adapter	440910-B21
HP BLc Emulex LPe1205- 8Gb FC HBA for HP c-Class BladeSystem	456972-B21
QLogic QMH2562 8Gb FC HBA for HP c-Class BladeSystem	451871-B21
HP Smart Array P700m/256 Controller	507925-B21
HP Smart Array P700m/512 Controller	508226-B21

- | | |
|-------------|---|
| Form Factor | <ul style="list-style-type: none">● The X1800sb is based on the HP ProLiant BL460c G6, which is a half-height server blade that plugs into the HP BladeSystem c3000 and c7000 enclosures |
| Management | <ul style="list-style-type: none">● HP ProLiant Onboard Administrator (powered by the Integrated Lights-Out 2 management processor) provides virtual KVM graphical remote console, virtual media, simplified server setup, and core server control functions out of the box.● 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 |

SAN Compatibility

at: www.hp.com/go/iLO

Warranty and software support

Warranty

- The X1800sb 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).

Optional Software to Enhance the X1800sb

HP StorageWorks Storage Mirroring Software - HP StorageWorks 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://www.hp.com/go/storageworks/storagemirroring>

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:

SAN Compatibility

<http://www.hp.com/go/dataprotectorexpress>

HP StorageWorks File Migration Agent - HP FMA is an automated solution designed to help simplify Windows-based file, web, and application server administration in small business to enterprise environments. This is accomplished through policy-based file migration and archive to popular storage targets, including HP StorageWorks Reference Information Storage System (RISS), HP StorageWorks File System Extender, and NAS, via Common Internet File System (CIFS).

The following Windows Storage Server features or add-ons are currently NOT supported by HP File Archiving software:

NOTE: Single Instance Storage (SIS) - (NOT SUPPORTED)

NOTE: DFS-Replication (DFS-R) - (NOT SUPPORTED)

NOTE: File Server Resource Manager (FSRM) - Content Filter, & File Screening - (NOT SUPPORTED)

For more information: <http://h18006.www1.hp.com/products/storage/software/fma/>

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: <http://www.hp.com/go/storageessentials>

Service and Support, HP Care Pack, and Warranty Information

HP Care Pack Services. Scalable, Flexible, Dependable. Like your storage.

Your storage is evolving. Get scalable support that evolves with it. HP Care Pack Services is an easy-to-buy, easy-to-use portfolio of packaged services covering your lifecycle needs. You can rely on our highly skilled, HP certified professionals to offer a breadth of expertise across leading storage technologies, and work side by side with you for optimal results. Partner with HP Technology Services to boost availability and avoid costly downtime by mitigating technology-related business risks. To help take the worry out of deploying, supporting and managing your storage technologies, we've designed a portfolio of service options that are as flexible, scalable and affordable as our storage.

Protect your business beyond the warranty

Standard warranty protects against product defects and some causes of downtime. HP Care Pack Services helps you proactively guard against unplanned downtime which can reduce your productivity and profitability. By using a standard approach to warranty uplifts, such as HP Care Pack Services, customers can be certain of consistency of operations for both mission-critical and standard business computing.

Extending warranties with HP Care Pack Services

The key to normalizing the warranty of combined solutions-is making service uplift simple: HP Care Pack Services. This portfolio of predefined packages, extending across the entire IT lifecycle, offering consulting, education, technical support, optimization, risk assessment, and more. It's entirely flexible allowing customers to extend the cover to the precise level of support required. Customer's standard hardware warranty, for example, can be upgraded to next-business-day response, to same-day coverage, or even to a committed six-hour call-to-repair service available 24 hours every day of the week.

- Provide consistent, predictable levels of support across your entire department or business
- Give you direct access to proven technical and problem-solving expertise
- Offer a choice of response-time and repair-time commitments
- Are available whenever and wherever you do business

For many products, post-warranty HP Care Pack Services are available when your original warranty has expired. Choose the support levels that meet your business requirements, from basic to mission-critical. In the new world of business technology, when your technology has to work for your business to work, who can you trust to make your technology work? HP Technology Services, the trusted business technology experts who manage your technology in action, because when technology works, business works.

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

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

Recommended Services	HP Care Pack Services recommended for optimal satisfaction of all deployments of your product.
3-Year HP Support Plus 24	3-Year HP Support Plus 24 provides integrated hardware and software support services designed specifically for your technology. HP Services engineers deliver reactive onsite hardware support and over-the-phone software support around-the-clock.
HP Installation and Startup Service for HP BladeSystem c-Class Infrastructure (OS + ICE)	HP Installation and Startup Service for HP BladeSystem c-Class Infrastructure provides basic hardware and software installation of your c-class BladeSystem. This service includes service planning, deployment, Installation verification tests (IVT) and a customer orientation session.

Service and Support, HP Care Pack, and Warranty Information

Product Number	Product Name	Service Name	Care Pack Services Product # and Band	Alternate Care Pack Services Product #
		HP Installation and Startup Service for HP BladeSystem c-Class Infrastructure (OS + ICE)	HA114A1-5N9	UF817E
AP805A	HP StorageWorks X1800sb Network Storage Blade	3-Year HP Support Plus 24	HA110A3-1LC	UR137E

Related Services

Services that will enhance the user experience in many product deployments.

HP Proactive Select Service HP Proactive Select Service improves IT performance and manageability through the use of cost effective flexible proactive services. This proactive service allows you to accelerate the ROI of your technology environment, by tailoring specific services to more quickly take advantage of your investment.

HP Entry Storage Data Migration Service for Windows 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

Service Name	Care Pack Services Product # and Band	Alternate Care Pack Service Product #
HP Proactive Select Service	Contact your HP sales rep or Channel Partner for assistance	Contact your HP sales rep or Channel Partner for assistance
HP Entry Storage Data Migration Service for Windows	Contact your HP sales rep or Channel Partner for assistance	Contact your HP sales rep or Channel Partner for assistance

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>

Service and Support, HP Care Pack, and Warranty Information

Remote Support Technology (RST)-HP Remote Support Pack

Taking a more proactive approach to IT support, the HP Remote Support pack plug-in module easily integrates with HP Systems Insight Manager to provide a powerful, unified "single pane of glass" solution for onsite and remote management.

HP Remote Support Pack enhances HP Systems Insight Manager with intelligent event diagnosis plus the automatic submission of hardware event notifications securely to HP support, including acknowledgment and status returns. It adds remote configuration collections to allow the delivery of assessment and proactive services for your SAN storage and HP-UX environments.

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

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://h20129.www2.hp.com/services/cache/77318-0-0-225-121.html>

Additional Services Information

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

<http://www.hp.com/hps/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 Wizard

NOTE: The steps outlined below are intended only as a guide for the options available. The X1800sb is built on the ProLiant BL460c G6 server. All ProLiant BL460c G6 options are supported by the X1800sb and will ship as separate components. HBA options listed below are available with optional factory-installation. For more information on BL460 G6 options and details on memory configuration, see the BL460c G6 QuickSpecs:

http://h18004.www1.hp.com/products/quickspecs/13238_div/13238_div.html

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

HP StorageWorks X1800sb Network Storage Blade	AP805A*
Server +Processor	Built on the HP ProLiant BL460c G6 Server Blade, with one Quad-Core Intel Processors L5506 (2.13GHz, 60w)
Memory	4GB (2x2GB) PC3-10600R
Operating System	Microsoft Windows Storage Server 2008, Standard X64 Edition, pre-installed
Hard Drives	2 x 146GB SFF 3G SAS 10K 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 as an affordable gateway server, add optional HBAs delivered as separate components or optional factory-installation

Fiber Channel, SAS and Network Adapter	HP NC512m Dual Port 10GbE Multifunction BL-c Adapter	440910-B21
Mezzanine Options	HP BLc Emulex LPe1205- 8Gb FC HBA for HP c-Class BladeSystem	456972-B21
	QLogic QMH2562 8Gb FC HBA for HP c-Class BladeSystem	451871-B21
	HP Smart Array P700m/256 Controller	507925-B21
	HP Smart Array P700m/512 Controller	508226-B21

Step 3 - If pairing the X1800sb with the SB40c storage blade for file services and iSCSI shared storage inside the BladeSystem enclosure, add the SB40c and hard drives to your order.

SB40c	HP StorageWorks SB40c Storage Blade	411243-B21
	HP StorageWorks SB40c Configure-to-order Storage Blade	434879-B21
	See the SB40c Storage Blade QuickSpecs for supported hard drives: http://h18006.www1.hp.com/products/storageworks/sb40c/index.html	

Step 4 - Order a 2nd processor for the X1800sb

2nd Processor	Intel® Xeon® processor HP L5506 (2.13 GHz, 4MB L3 Cache, 60W, DDR3-800) BL460c G6 Kit	513859-B21
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Product Configuration Wizard

Step 5 - Order additional memory for the X1800sb

Additional memory options	Registered DIMMS (RDIMMs)	
	HP 2GB 2Rx8 PC3-10600R -9 Kit	500656-B21
	HP 4GB 2Rx4 PC3-10600R-9 Kit	500658-B21
	HP 4GB 4Rx8 PC3-8500R-7 LP Kit	500660-B21
	HP 8GB 2Rx4 PC3-10600R-9 Kit	500662-B21

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