



# Manage your data better with an improved storage option

## HP D6000 Disk Enclosure

Finding it difficult to keep up with the growth in unstructured data? Looking for a cost-effective high capacity storage option? With the 6 Gb/s SAS HP D6000 Disk Enclosure, HP extends and redefines direct-attached storage for BladeSystem servers, combining the simplicity and cost effectiveness of direct-attached storage without sacrificing flexibility or performance. Use the D6000 as part of a straightforward in-rack 6 Gb/s SAS implementation that delivers high-density, low-cost external zoned direct attach storage for HP BladeSystem and ProLiant servers. The D6000 helps you easily configure storage on the fly with easy-to-use management software.

### Key features and benefits

High-density, low-cost external SAS storage for BladeSystem and ProLiant servers

- The 6 Gb/s SAS D6000 is designed with two pull-out disk drawers to support hot-plug large form factor SAS or SAS MDL drives in just 5U of rack space for customers requiring a dense storage option with a low acquisition cost that lowers cost per U.
- The simplicity of an in-rack storage solution eliminates expense and complexity from the storage architecture; HP Smart Array P721m controller in the blade server, and 6 Gb/s SAS BL switches in the blade enclosure can be connected to up to six D6000 enclosures.
- Supports up to six D6000 enclosures from a single BladeSystem enclosure, providing up to 1260 TB of in-rack storage for customers requiring high-density, low-cost storage.

- The D6000 can also be directly connected to ProLiant DL and ML servers using the HP Smart Array P421, and P812 Controllers using a standard 2M SAS cable. For the P421 support is single domain only. For the P822 controller support is both single and domain.

#### Build local storage on the fly for BladeSystem servers

- Use the management software of the 6 Gb/s SAS BL switch to group D6000 drives and assign them to individual blade servers. These drives now appear as local storage to that server.
- With D6000 zoned direct attach capabilities server administrators can build local storage on the fly according to their configuration requirements.
- Just add additional drives to the D6000 and zone to a newly-deployed blade server, or add capacity to the zone of an existing blade server configuration. No need for complex configuration or rewiring.

#### High performance 6 Gb/s SAS connectivity to external storage

- 6 Gb/s host connectivity enables higher performance, eases configuration and deployment, and broadens supported features of a D6000 using HP Smart Array P721m controller and 6 Gb/s SAS BL switches.
- With the D6000, applications and storage are installed in the same rack. Latency is reduced as data does not travel over large distances.
- A Smart Array P721m controller installed in the blade server provides 2 GB flash-backed write cache (FBWC).

## Technical specifications

### HP D6000 Disk Enclosure

<b>Product name</b>	HP D6000 Disk Enclosure with dual I/O modules
<b>SKU part numbers</b>	QQ695A
<b>Model differentiator</b>	Base model for SAS and SAS MDL drives. Add QQ696A when using dual-ported SAS drives to create a dual domain environment. Includes redundant power supplies and redundant fans.
<b>Drive description</b>	70 LFF SAS
<b>Drive type</b>	1 TB 6G 7.2K LFF dual-port MDL SAS 2 TB 6G 7.2K LFF dual-port MDL SAS 3 TB 6G 7.2K LFF dual-port MDL SAS 300 GB 6G 15K LFF dual-port SAS 450 GB 6G 15K LFF dual-port SAS 600 GB 6G 15K LFF dual-port SAS
<b>Capacity</b>	1260 TB raw Maximum with six enclosures
<b>Storage expansion options</b>	Up to six; See QuickSpecs for detailed information
<b>Host interface</b>	6 Gb/s SAS
<b>Supported storage controllers</b>	Smart Array P721m/2 GB FBWC Smart Array P421/2 GB FBWC 6 Gb 2-ports Ext SAS controller Smart Array P822/2 GB FBWC 6 Gb 2-ports Int/4-ports Ext SAS controller
<b>SAN backup support</b>	No
<b>Storage mirroring support</b>	No
<b>Systems Insight Manager support</b>	Yes
<b>Compatible operating systems</b>	Windows® Server 2003 Microsoft® Windows Server 2008 R2 Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) VMware ESX Depending on host connectivity
<b>Form factor</b>	5U
<b>Warranty (parts-labor-onsite)</b>	Three-year parts only

## Recommended solution packages

<b>The total package—Solution value statements</b>	<p>High density, high capacity storage for unstructured data, high performance computing, Web farms, and Microsoft Exchange.</p>	<p>Required</p>
<b>The total package—Software</b>	<p><b>HP Systems Insight Manager</b></p> <p>HP Systems Insight Manager can be used to manage the storage on the D6000. You can receive pre-failure alerts with HP Systems Insight Manager. When drives installed in a D6000 are used in conjunction with the Smart Array P721m Controller and Systems Insight Manager, the Smart Array firmware in HP hard drives enables extensive fault prediction capabilities. If potential problems develop in one of the drives, the Smart Array Controller, Systems Insight Manager and Smart hard disk drive let you know in advance so you can have the drive replaced, before it fails, under warranty.</p> <p><a href="http://h18006.www1.hp.com/storage/smisproviders.html?jumpid=reg_R1002_USEN">http://h18006.www1.hp.com/storage/smisproviders.html?jumpid=reg_R1002_USEN</a></p>	<p>Optional</p>
<b>The total package—Service</b>	<p>Tap into the HP support services advantage, backed by the strategic and technical know-how of our consulting experts—for a single source solution that makes the most of your investments. Depending on your individual support requirements, choose from three levels of care that cover the entire lifecycle to better address your needs:</p> <p><b>Optimized Care service recommendations</b></p> <hr/> <p><b>Delivers best performance and stability through deployment and proactive management practices</b>          HP Installation Service          HP Proactive Care 24x7; Plus, 40 credits per year          HP Enhanced Implementation Service for SANs</p> <p><b>Standard Care service recommendations</b></p> <hr/> <p><b>Maintains high level of uptime, along with expert help to cut the cost and complexity of implementation and support</b>          HP Installation Service          HP Proactive Care 24x7; Plus, 10 credits per year          HP Enhanced Implementation Service for SANs</p> <p><b>Basic Care service recommendations</b></p> <hr/> <p><b>Minimum recommended support</b>          HP Installation Service          HP Support Plus 24; Plus, 10 credits per year          HP Enhanced Implementation Service for SANs</p> <p>If none of our support recommendations meet your needs, we can tailor a service solution for your unique support requirements. Only HP brings together deep expertise, proactive and business-critical support and a strong partner network—plus, a full set of infrastructure services designed to power a Converged Infrastructure. For more information, visit: <a href="http://hp.com/services/storage">hp.com/services/storage</a>.</p>	
<b>Warranty and included services</b>	<p>Three-year limited warranty, no parts exchange, no next business day delivery</p>	
<b>QuickSpecs URL</b>	<p><a href="http://h18000.www1.hp.com/products/quickspecs/14419_div/14419_div.pdf">http://h18000.www1.hp.com/products/quickspecs/14419_div/14419_div.pdf</a></p>	

## HP Services

Tap into the HP support services advantage, backed by the strategic and technical know-how of our consulting experts—for a single source solution that makes the most of your investments. Depending on your individual support requirements, choose from three levels of care that cover the entire lifecycle to better address your needs:

**Optimized Care service recommendations** delivers best performance and stability through deployment and proactive management practices.

HP Installation Service: Basic hardware installation only for D6000 Modular Disk System

HP Proactive Care 24x7; Plus, 20 credits per year

**Additional Option:** HP Personalized Support; HP Personalized Support Additional Day; 3Y Proactive Select 30 Credit

**Upsell:** HP Enhanced Implementation Service for SANs; HP Data Migration Services; HP Proactive Select

**Standard Care service recommendations** maintains high level of uptime, along with expert help to cut the cost and complexity of implementation and support.

HP Installation Service: Basic hardware installation only for D6000 Modular Disk System

HP Proactive Care 24x7; Plus, 10 credits per year

**Additional Option:** HP Personalized Support; HP Personalized Support Additional Day; 3Y Proactive Select 30 Credit

**Upsell:** HP Enhanced Implementation Service for SANs; HP Data Migration Services; HP Proactive Select

**Basic Care service recommendations** is the minimum recommended support.

HP Installation Service: Basic hardware installation only for D6000 Modular Disk System

HP Support Plus 24; Plus, 10 credits per year

**Additional Option:** HP Proactive Select 10 or 30 Credits Service

**Upsell:** HP Enhanced Implementation Service for SANs; HP Data Migration Services; HP Proactive Select

If none of our support recommendations meet your needs, we can tailor a service solution for your unique support requirements. Only HP brings together deep expertise, proactive and business-critical support and a strong partner network—plus, a full set of infrastructure services designed to power a Converged Infrastructure. For more information visit [hp.com/services/storage](http://hp.com/services/storage).

## For more information

To know more about how the HP D6000 Disk Enclosure can help you manage your data effectively, visit: [hp.com/go/d6000](http://hp.com/go/d6000).

---

### Get connected

[hp.com/go/getconnected](http://hp.com/go/getconnected)

Current HP driver, support, and security alerts delivered directly to your desktop

© Copyright 2012 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

Microsoft and Windows are U.S. registered trademarks of Microsoft Corporation.

4AA4-3447ENW, September 2012

