HP StorageWorks
MSL2024, MSL4048 and MSL8096 Tape Libraries
Product Brief

The HP StorageWorks MSL2024, MSL4048 and MSL8096 Tape Libraries offer remarkable storage density without consuming valuable rack space.

The HP StorageWorks MSL2024, MSL4048 and MSL8096 Tape Libraries deliver the maximum amount of storage in the minimum amount of space meeting the demands of a wide range of business environments for unattended backup, archive and disaster recovery. The MSL Tape Libraries feature web-based remote management for ease of administration from across the room or across the globe, thus reducing dependencies on local IT staff.

HP MSL Tape Libraries are now available with HP LTO-4 Ultrium SAS tape drives. This latest tape technology combines the highest levels of LTO performance with efficient hardware-based data encryption providing enhanced data security to comply with increased privacy regulations.

Each MSL Tape Library includes a number of 12-slot removable magazines, including user configurable mail slots(s) and also a bar code reader for efficient media management.

Small and medium businesses requiring an entry-level tape library will benefit from the HP StorageWorks MSL2024 Tape Library which delivers a compressed

capacity of up to 38.4TB* in a compact 2U form factor when configured with HP LTO-4 Ultrium.

The HP StorageWorks MSL4048 Tape Library gives a compressed capacity of up to 76.8TB* with HP LTO-4 Ultrium in a 4U form factor for small and medium businesses, unattended workgroups, remote offices and replicated systems.

For large businesses, workgroups or remote offices, the HP StorageWorks MSL8096 Tape Library provides 153.6TB* of compressed storage capacity in only an 8U form factor when configured with HP LTO-4 Ultrium. With a reliability rating of 2 million mean swaps between failures you can be assured of high end library performance standards. In addition, you may add a second power supply for even greater reliability.

All HP MSL Tape Libraries arrive rack-ready for quick installation in a standard 19" rack, but both the HP MSL2024 and MSL4048 can be converted to a tabletop configuration with a conversion kit.

	MSL2024	MSL4048	MSL8096
Form Factor	2U	4U	8U
Drives supported	1 LTO-4 Ultrium 1840 Up to 2 LTO-4 Ultrium 1760 1 LTO-3 Ultrium 960 Up to 2 LTO-2 Ultrium 920 Up to 2 LTO-2 Ultrium 448	Up to 2 LTO-4 Ultrium 1840 Up to 4 LTO-4 Ultrium 1760 Up to 2 LTO-3 Ultrium 960 Up to 4 LTO-2 Ultrium 920	2 to 4 LTO-4 Ultrium 1840 2 to 4 LTO-4 Ultrium 1760 2 to 4 LTO-3 Ultrium 960 2 to 4 LTO-4 Ultrium 920
Max capacity (compressed 2:1)	38.4TB	76.8TB	153.6TB
Max transfer rate (compressed 2:1)	1.2TB/hour	1.7TB/hour	3.4TB/hour

The HP MSL2024, MSL4048 and MSL8096 Tape Libraries deliver highly reliable, high density storage complete with a remote web-based interface to manage your library from across the globe.

Features and Benefits

Greater value – capacities up to 153.6TB* with HP LTO-4 Ultrium, MSL Tape Libraries pack the maximum amount of storage into the minimum amount of space.

Data security – hardware based data encryption with compression is available with LTO-4 Ultrium and provides the most efficient way to comply with privacy regulations ensuring that data on tape is securely transferred between sites. Robust encryption key management is supported via HP Data Protector Software and other ISV backup applications.

Manageability – the integrated web-based management capability allows an IT administrator to control and troubleshoot the device remotely, eliminating costly onsite IT resources at remote offices.

Ease of use – all tape libraries include a standard bar code reader to provide faster inventory times and to facilitate tracking of media. The removable 12-slot magazines, two in the MSL2024, four in the MSL4048 and eight in the MSL8096, enable bulk loading of media and also provide a convenient bulk storage unit for moving media off-site. For dedicated import/export of media cartridges, each library includes user enabled mail slots.

Reduced installation time – the MSL2024, MSL4048 and MSL8096 Tape Libraries are delivered as rack-ready for quick installation in a standard 19" rack; a rack kit is included in the box. A separate rack-to-tabletop conversion kit is available to purchase for the MSL2024 and MSL4048 allowing these libraries to be configured for a desktop environment.

Investment protection – benefit from a straight-forward upgrade path as your storage capacity and performance needs grow. Tool-free next generation tape drive upgrade kits allow the latest HP Storage Works LTO Ultrium Tape Drives to be added to your library as they become available. A choice of SCSI, FC and SAS tape drive interfaces provide flexible options for installing the library in a SCSI, SAN or SAS environment.

High reliability – HP MSL Tape Libraries provide peace of mind with over 2 million mean swaps between failure. The HP MSL4048 and MSL8096 provide all the reliability features expected with larger tape libraries including a user-installable optional second power supply.

Extensive compatibility testing – HP MSL Tape Libraries are supported on a broad range of industry leading servers, operating systems and backup software. For more information, visit: **www.hp.com/go/ebs**

* Assumes 2:1 data compression ratio

HP StorageWorks MSL2024, MSL4048 and MSL8096 Tape Libraries

	MSL2024	MSL4048	MSL8096
Form Factor	2U	4U	8U
Tape drives supported	1 LTO-4 Ultrium 1840 1 to 2 LTO-4 Ultrium 1760 1 LTO-3 Ultrium 960 1 to 2 LTO-3 Ultrium 920 1 to 2 LTO-2 Ultrium 448	1 to 2 LTO-4 Ultrium 1840 2 to 4 LTO-4 Ultrium 1760 1 to 2 LTO-3 Ultrium 960 1 to 4 LTO-3 Ultrium 920	2 to 4 LTO-4 Ultrium 1840 2 to 4 LTO-4 Ultrium 1760 2 to 4 LTO-3 Ultrium 960 2 to 4 LTO-3 Ultrium 920
Number of cartridge slots and removable magazines	24 2	48 4	96 8
Maximum capacity (compressed 2:1)	38.4TB	76.8TB	153.6TB
Maximum sustained transfer rate (compressed 2:1)	1.2TB/hour	1.7TB/hour	3.4TB/hour
Dimensions (w x h x l) Note: out-of-box	3.4 x 17.5 x 31.5in (8.8 x 44.5 x 80.7cm)	6.8 x 17.5 x 30.5in (17.4 x 44.5 x 77.5cm)	13.9 x 18.9 x 31.7in (35.2 x 48 x 80.6cm)
Weight Note: out-of-box	34.3lb (15.6kg)	65.9lb (25.6kg)	102lb (46kg)
Interfaces available	4Gb Fibre Channel *(Ultrium 1840, 960)* Ultra320 LVD/SE SCSI *(Ultrium 1840, 960 and 920)* Ultra160 LVD/SE SCSI *(Ultrium 448)* 3Gb/sec SAS *(Ultrium 1760, 920)*	4Gb Fibre Channel *(Ultrium 1840, 960)* Ultra320 LVD/SE SCSI *(Ultrium 1840, 960 and 920)* 3Gb/sec SAS *(Ultrium 1760, 920)*	4Gb Fibre Channel *(Ultrium 1840, 960)* Ultra320 LVD/SE SCSI *(Ultrium 1840, 960)* 3Gb/sec SAS *(Ultrium 1760, 920)*
What's included	All HP StorageWorks MSL Tape Libraries include one 1.83M US power cord (C13, 10A), one 2.5M PDU power cord (C13/C14, 10A), one RJ-45 Ethernet cable, rack-mount hardware (for use with HP's 10000 series, 9000 series, 5000 series or System E racks), and product documentation including User & Service Guide (CD) and Getting Started Poster SCSI models also include one 6ft VHDCI to HDTS68 SCSI cable per drive, one HDTS68 SCSI terminator per SCSI tape drive, and one 0.5M LVD HDTS to LVD HDTS daisy chain cable (2 drive LTO-2 Ultrium 448 configurations only) MSL8096 also includes HP Data Protector Software 61-250 slot License-to-Use entitlement certificate		
Warranty	1-year, parts exchange, next business day	1-year, parts exchange, next business day	1-year, onsite, next business day
Recommended media	For information on recommended HP Storage Media, please visit: **www.hp.com/go/storagemedia**		

HP Care Pack services

HP Care Pack Services offer upgraded service levels to extend and expand your standard product warranty with easy-to-buy, easy-to-use support packages that help you make the most of your hardware and software investments. They let you choose the support levels that meet your business requirements, from basic to mission critical. They help you contain total cost of ownership.

HP Care Pack warranty extensions can be purchased along with HP products to cost-effectively upgrade or extend your warranty. For many products, post warranty HP Care Pack Services are available when your original warranty has expired.

For more information on these services, contact your local HP representative, authorized HP business partner, or visit: **www.hp.com/go/storage/carepacks**

Order Information – MSL2024 Tape Library

Product number/SKU	Product name/description	Product number/SKU	Product name/description
AJ034A	HP StorageWorks MSL2024 1 LTO-4 Ultrium 1840 4Gb FC Drive Library	AH169A	HP StorageWorks MSL2024 1 LTO-3 Ultrium 920 SCSI Drive Library
AJ033A	HP StorageWorks MSL2024 1 LTO-4 Ultrium 1840 SCSI Drive Library	AH170A	HP StorageWorks MSL2024 2 LTO-3 Ultrium 920 SCSI Drive Library
AK378A	HP StorageWOrks MSL2024 1 LTO-4 Ultrium 1760 SAS Drive Library	AH559A	HP StorageWorks MSL2024 1 LTO-3 Ultrium 920 SAS Drive Library
AG326B	HP StorageWorks MSL2024 1 LTO-3 Ultrium 960 4Gb FC Drive Library	AG116A	HP StorageWorks MSL2024 1 LTO-2 Ultrium 448 SCSI Drive Library
AG115A	HP StorageWorks MSL2024 1 LTO-3 Ultrium 960 SCSI Drive Library	AG117A	HP StorageWorks MSL2024 2 LTO-2 Ultrium 448 SCSI Drive Library

Order Information – MSL4048 Tape Library

Product number/SKU	Product name/description	Product number/SKU	Product name/description
AJ036A	HP StorageWorks MSL4048 1 LTO-4 Ultrium 1840 4Gb FC Drive Library	AG325B	HP StorageWorks MSL4048 2 LTO-3 Ultrium 960 4Gb FC Drive Library
AJ038A	HP StorageWorks MSL4048 2 LTO-4 Ultrium 1840 4Gb FCI Drive Library	AG322A	HP StorageWorks MSL4048 1 LTO-3 Ultrium 960 SCSI Drive Library
AJ035A	HP StorageWorks MSL4048 1 LTO-4 Ultrium 1840 SCSI Drive Library	AG323A	HP StorageWorks MSL4048 2 LTO-3 Ultrium 960 SCSI Drive Library
AJ037A	HP StorageWorks MSL4048 2 LTO-4 Ultrium 1840 SCSI Drive Library	AH171A	HP StorageWorks MSL4048 1 LTO-3 Ultrium 920 SCSI Drive Library
AK379A	HP StorageWorks MSL4048 2 LTO-4 Ultrium 1760 SAS Drive Library	AH172A	HP StorageWorks MSL4048 2 LTO-3 Ultrium 920 SCSI Drive Library
AG324B	HP StorageWorks MSL4048 1 LTO-3 Ultrium 960 4Gb FC Drive Library	AH560A	HP StorageWorks MSL4048 1 LTO-3 Ultrium 920 SAS Drive Library

Order Information – MSL8096 Tape Library

Product number/SKU	Product name/description	Product number/SKU	Product name/description
AJ040A	HP StorageWorks MSL8096 2 LTO-4 Ultrium 1840 4Gb FC Drive Library	AH218A	HP StorageWorks MSL8096 2 LTO-3 Ultrium 960 4Gb FC Drive Library
AJ039A	HP StorageWorks MSL8096 2 LTO-4 Ultrium 1840 SCSI Drive Library	AH219A	HP StorageWorks MSL8096 2 LTO-3 Ultrium 960 SCSI Drive Library
AK382A	HP StorageWorks MSL8096 2 LTO-4 Ultrium 1760 SAS Drive Library	AH561A	HP StorageWorks MSL8096 2 LTO-3 Ultrium 920 SAS Drive Library

Options	
AG119A	HP StorageWorks MSL2024 Ultrium Left Magazine Kit
AG330A	HP StorageWorks MSL4048/8096 Ultrium Left Magazine Kit
AG120A	HP StorageWorks MSL2024/4048/8096 Ultrium Right Magazine Kit
AG121A	HP StorageWorks MSL2024 Rack-to-tabletop Conversion Kit
AG329A	HP StorageWorks MSL4048 Rack-to-tabletop Conversion Kit
AH220A	HP StorageWorks MSL4048/8096 Redundant Power Supply Upgrade Kit

For ordering information on tape drive upgrade kits and all other options please refer to the HP StorageWorks MSL Tape Libraries Quickspecs available on hp.com

For more information visit www.hp.com/go/tape

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