

# MID-RANGE STORAGE GUIDE

## Entry-level/Midrange Tape Products



	Entry-level Tape Drives			Entry-level Tape Libraries				Midrange Tape Drives		Midrange Tape Libraries	
	TS2230	3580	TS2340	TS3100	TS3100	TS3200	TS3200	TS1030	TS1040	TS3310	TS3500
<b>Product Name</b>	3580	3580	3580	3573 L2U	3573 L2 3573 L4U U featuring Ultrium 3 Half-High	3573 L4U	3573 L4U featuring Ultrium 3 Half-High	3588	3588	3576	3584
<b>Machine Type model</b>	H3L	3580 L33	L43 S43	3573 L2U and PNs 3573L3S, 3573F3S, 3573L4S, 3583F4S, 3583S4S	3573 PNs 3573L32, 3573S32	3573 L4U and PNs 3573L3H, 3573F3H, 3573L4H, 3573F4H, 3573S4H	3573 PNs 3573L34, 3573S34	3588 F3B	F4A	3576 L5U E9U	3584 L53 D53
<b>Product strengths</b>	Multiplatform support Half-high form factor Lower entry price	Multiplatform support Backward read capable to LTO1 Max performance for LTO3	3 Gbit SAS attach- ment Encryption capable Multiplatform support High performance High capacity	multiplatform support high performance high capacity	multiplatform support, same capacity as full high at a lower price	multiplatform support high performance high capacity	multiplatform support, same capacity as full high at a lower price	multiplatform support high performance high capacity	multiplatform support high performance high capacity data protection	multiplatform support high performance high capacity	multiplatform support high performance high capacity
<b>Number of drives</b>	1	1	1	1	1 or 2 LTO Gen 3 half-high	1-2	1-4 LTO Gen 3 half- high	1	1	1-18	1-192
<b>Max number of cartridges</b>	1	1	1	24	24	48	48	NA	NA	396	6,887 <sup>7</sup>
<b>WORM/ Encryption</b>	yes/no	yes/no	yes/yes	yes/yes	yes/no	yes/yes	yes/no	yes/no	yes/yes	yes/yes	yes/yes
<b>Native capacity</b>	Gen 3: 400 GB	Gen 3: 400 GB	Gen 4: 800 GB	Gen 3: 9.6 TB Gen 4: 19.2 TB	up to 9.6 TB	Gen 3: 19.2 TB Gen 4: 38.4 TB	up to 19.2 TB	400 GB	800 GB	Gen 3: 158.4 TB Gen 4: 316.8 TB	up to 5.5 PB
<b>Typical capacity<sup>2</sup></b>	Gen 3: 800 GB	Gen 3: 800 GB	Gen 4: 1600 GB	Up to 38.4 TB	up to 19.2 TB	Up to 76.8 TB	up to 38.4 TB	800 GB	1600 GB	up to 633.8 TB	up to 11 PB
<b>Native performance</b>	Gen 3: 60 MBps	Gen 3: 80 MBps	Gen 4: 120 MBps	120 MBps	up to 120 MBps	up to 240 MBps	up to 240 MBps	80 MBps	120 MBps	21.6 Gbps	up to 23 TBps
<b>Interface</b>	160 MBps SCSI	160 MBps SCSI	4 Gbps FC 3 Gbps SAS	4 Gbps FC 3 Gbps SAS LVD SCSI	3 Gbps SAS LVD SCSI	4 Gbps FC 3 Gbps SAS LVD SCS	3 Gbps SAS LVD SCSI	4 Gbps FC	4 Gbps FC	4 Gbps FC 3 Gbps SAS LVD SCSI	4 Gbps FC SCSI-LVD
<b>Supported tape libraries</b>	NA	NA	NA		NA	NA	NA	TS3500	TS3500	NA	NA
<b>Platform support<sup>1</sup></b>	System p, System i, System x, System z, Microsoft Windows, HP UX, Sun Solaris, Linux	System p, System i, System x, System z, Microsoft Windows, HP UX, Sun Solaris, Linux	System p, System i, System x, System z, Microsoft Windows, HP UX, Sun Solaris, Linux	System p, System i, System x, System z, Microsoft Windows, HP UX, Sun Solaris, Linux	System p, System i, System x, Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z, Microsoft Windows, HP UX; Sun Solaris, Linux	System p, System i, System x, Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z, Microsoft Windows, HP UX; Sun Solaris, Linux	System p, System i, System x, System z, Microsoft Windows, HP UX; Sun Solaris, Linux	System p, System i, System x, System z, Microsoft Windows, HP UX; Sun Solaris, Linux	System p, System i, System x, System z, Microsoft Windows, HP UX; Sun Solaris, Linux
<b>Application support<sup>6</sup></b>	A, B, C, D, E, F, G, H, J, L, M	A, B, C, D, E, F, G, H, J, L, M, N <sup>7</sup>	A (others in plan)	A, B, C, D, E, F, G, H, J, L, M, N <sup>7</sup>	B (others in plan)	A, B, C, D, E, F, G, H, J, L, N <sup>7</sup>	B (others in plan)	A, B, C, D, E, F, G, H, J, L <sup>7</sup>	A (others in plan)	A, B, C, D, E, F, G, H, J, L <sup>7</sup>	A, B, C, D, E, F, G, H, J, L <sup>7</sup>
<b>Media</b>	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8	Refer to Tape Media, page 8
<b>Warranty period</b>	3 years <sup>5</sup>	3 years <sup>5</sup>	3 years <sup>5</sup>	3 years <sup>5</sup>	3 years <sup>5</sup>	3 years <sup>5</sup>	3 years <sup>5</sup>	1 year	1 year	1 year	1 year
<b>Warranty type</b>	CRU	CRU	CRU	CRU	CRU	CRU	CRU	Onsite Repair (24x7)	Onsite Repair (24x7)	Next Business Day (9x5)	Onsite Repair (24x7)

F/W = Fast/Wide, Diff = Differential, N/A = Not Applicable, FC = Fibre Channel, X = Extended length cartridge, IOE = IBM Onsite Exchange, CRU = Customer Replaceable Unit

NOTES 1: Max number of cartridges decreases as tape drives are added. 2: Typical compression for open system environments is 2:1 (user results may vary) 4: Also includes selected IBM xSeries®, Netfinity, IBM System i, IBM AS/400® and IBM System p servers. System z support for Linux only 5: Refer to

ibm.com/storage/tape/compatibility for current application support 6: In most countries 7: The following vendors provide application support to the platforms defined above: A = IBM Tivoli® Storage Manager, B = Symantec VERITAS NetBackup, C = Symantec VERITAS Backup Exec, D = EMC Legato NetWorker, E = CA BrightStor ARCserve Backup, F = HP OpenView Storage Data Protector, G = CommVault Galaxy, H = BakBone NetVault, I = LSC, J = IBM BRMS, K = IBM OnDemand, L = HelpSystems Robot/Save, M = LXI Media Management, N = Dantz.

## Enterprise Tape Products



	Tape Drive	Tape Controller	Tape Library		Tape Virtualization		
	3592	3592	3577	3584	Virtualization Engine		
Product Name	TS1120	TS1120	TS3400	TS3500	TS7510	TS7520	TS7740
Machine Type model	3592 E05	3592 C06	3577 L5J	3584 L23 D23	3954 CV5 (requires additional machine types and models)	3954 CV6 (requires additional machine types and models)	3957 V06 (requires additional machine types and models)
Product strengths	multiplatform support high performance high capacity data protection	System z attachment of TS1120 drives high performance	compact format operates in library or autoloader mode	multiplatform support advanced management scalable	reduces backup window reduces recovery time augments native tape	reduces backup window reduces recovery time high capacity	increases performance scalable reduces cost
Number of drives	1	1-12	1-2	1-192	up to 512 (1 node)* up to 1,024 (2 node)*	up to 1024 (1 node)* up to 4096 (4 node)*	up to 128* up to 768* (3 site GRID)
WORM/Encryption	yes/yes	yes/yes	yes/yes	yes/yes	no/yes**	no/yes	no/no
Number of cartridges	NA	NA	18	6260 <sup>†</sup>	up to 4,096 (1 node)* up to 8,192 (2 node)*	up to 64,000 (1 node)* up to 256,000 (4 node)*	up to 1,000,000*
Native capacity	60/100 GB (JJ/JR media) 300/500 GB (JA/JW media) 700 GB (JB/JX media)	NA	up to 1.8 TB up to 9 TB up to 12.6 TB	up to 626 TB up to 3.1 PB up to 4.3 PB	up to 23 TB (1 node) up to 46 TB (2 node)	up to 884 TB EE <sup>12</sup> up to 19.5 TB LE <sup>12</sup>	up to 6 TB up to 18 TB (3 site GRID)
Typical capacity <sup>1</sup>	180/300 GB with JJ/JR 900/1500 GB with JA/JW 2.1 TB with JB/JX	NA	up to 5.4 TB up to 27 TB up to 37.8 TB	up to 1.87 PB up to 9.3 PB up to 13.1 PB	up to 46 TB (1 node) up to 92 TB (2 node)	up to 884 TB EE <sup>12</sup> up to 1.76 PB	up to 18 TB up to 54 TB (3 site GRID)
Native performance	up to 104 MBps	Varies <sup>§</sup>	up to 208 MBps	up to 104 MBps	up to 600 MBps	up to 4.8 Gbps	up to 600 MBps
Interface	4 Gbps FC	4 Gbps FC	4 Gbps FC	4 Gbps FC	2 Gbps FC	4 Gbps FC	4 Gbps FC
Supported tape library	TS3400, TS3500, 3494***	TS3500, 3494***	NA	NA	TS3500, 3494***	TS3500, TS3310, TS3200, TS3100, 3494***	TS3500, 3494***
Platform support <sup>6</sup>	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System i, System x, System z; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System x, System z <sup>10</sup> , System i <sup>7</sup> ; Microsoft Windows; HP UX; Sun Solaris; Linux	System p, System x, System z <sup>10</sup> , System i <sup>7</sup> ; Microsoft Windows; HP UX; Sun Solaris; Linux	System z
Application support <sup>8</sup>	A B C D E F G H J L <sup>7</sup>	A B C D E F G H J L <sup>7</sup>	A B C D E J	See drive	A, B, D, E, F, H <sup>7</sup>	A, B	E
Media	Refer to Tape Media, page 8	NA	Refer to Tape Media, page 8	Refer to Tape Media, page 8	NA	NA	NA
Warranty period	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)	1 year Onsite Repair (24x7)

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NOTES 1: Typical compression for mainframe environments is 3:1; 2:1 for open systems (user results may vary) 2: Max number of 3592 cartridges decreases as tape drives are added 3: IBM AIX® 4.1.5 or later. 4: Load and search only 5: Server platforms with SAN-ready attachability, model- and feature-dependent. 6: The latest ISV support can be found in the connectivity section at [ibm.com/storage/tape/compatibility](http://ibm.com/storage/tape/compatibility). 7: The following vendors provide application support to the platforms defined above: A = IBM Tivoli Storage Manager, B = Symantec VERITAS NetBackup, C = Symantec VERITAS Backup Exec, D = EMC Legato NetWorker, E = CA BrightStor ARCserve Backup, F = HP OpenView Storage Data Protector, G = CommVault Galaxy, H = BakBone NetVault, I = LSC, J = IBM BRMS, K = IBM OnDemand, L = Help/Systems Robot/Save, M = LXI Media Management. 8: Performance varies by environment 10: Applies to Linux on System z using FCP 11: Requires RPO

12: EE=Enterprise Edition LE=Limited Edition