

SONY

DDS TAPE DRIVES

SERIES FOR SYSTEM INTEGRATORS

*SONY'S TAPE TECHNOLOGY LEADERSHIP
DELIVERS HIGH PERFORMANCE
AND RELIABILITY FOR
DDS-2 AND DDS-3 FORMATS*

*ENTRY-LEVEL SOLUTION
FOR SMALL BUSINESS
SDT-7200/BMI, (INT) SDT-S7200/ME (EXT)*

*MID-RANGE SOLUTION FOR
PC SERVERS AND SMALL NETWORKS
SDT-7000/BMI, (INT) SDT-S7000/ME (EXT)*

*HIGH-END SOLUTION FOR
SMALL TO MID-SIZE NETWORKS
SDT-9000/BMI, (INT) SDT-S9000/ME (EXT)*

*2 YEAR LIMITED WARRANTY
1 YEAR 24-HOUR SWAP SERVICE*



Storage by Sony



SYSTEM INTEGRATOR SERIES

*An industry standard
for cost-effective backup.*

Backing up important data is an increasingly critical concern for any business, from small and home office operations to mid-size organizations that store their information on servers and networks. However, as the capacities of today's desktop and server hard drives continue to expand, systems integrators are challenged to provide an optimum solution that meets their clients' needs at the lowest cost performance.

The DDS (Digital Data Storage) tape format, conceived and co-developed by Sony, is the most widely accepted and cost-effective solution available for backing up small to mid-size applications. Whether your clients require fast transfer rates, high storage capacity, or a low cost per megabyte, Sony's family of DDS tape products provides a solution. These light, compact tapes and drives deliver superior reliability and high performance in a wide range of capacities – from entry-level drives to the very latest DDS-3 format.

BMI MODEL

- 1 Internal DDS tape drive
with a 3.5" Sony white mounted bezel
- 1 Cleaning cartridge
- 1 User's guide
- 2 Year limited warranty registration card
- 1 Year, 24-hour swap service

ME MODEL

- 1 External DDS tape drive
- 1 Cleaning cartridge
- 1 User's guide
- 1 Power cord
- 2 Year, limited warranty registration card
- 1 year, 24-hour swap service

STREAMLINED PACKAGE PROVIDES LOW COST-PERFORMANCE

Sony's DDS integration series provides two configurations that have been streamlined to meet the cost-performance needs of systems integrators. Both the BMI internal drive package and the ME external drive package include a DDS tape drive, a cleaning cartridge and a user's guide, and come with a two-year, limited warranty and a one-year, 24-hour swap service program. All of the drives feature Sony's patented Super Head Cleaner™ Mechanism, which automatically cleans the read/write heads after every 15 minutes of use to remove contamination – the greatest cause of tape drive failures. In addition, a bundled cleaning cartridge is included for periodic cleaning to further reduce head contamination. These models replace Sony's previous BM, BMR and M models, providing a simplified solution for the lowest cost-performance.

A WIDE RANGE OF SOLUTIONS

To meet the needs of a variety of organizations with different storage capacity requirements, Sony's integration series includes three models each for both the internal and external drive packages.

ENTRY-LEVEL DRIVES FOR SMALL BUSINESSES

For small and home office businesses, Sony's SDT-7200/BMI and SDT-S7200/ME packages provide a cost-effective, entry-level solution based on the DDS-2 format. With up to 4 GB capacity and a 778 KB/second sustained data transfer rate (without compression), the drives provide a powerful backup solution at the lowest cost. In addition, this solution is backward compatible with DDS-1 tape cartridges, so your customers can easily migrate to the DDS-2 format and still access their previously stored data.



SONY'S PATENTED SUPER HEAD CLEANER MECHANISM

MID-RANGE SOLUTION FOR PC SERVERS AND SMALL NETWORKS

Sony's SDT-7000 drive is the highest-performance DDS-2 drive in the industry. Designed to back up a single PC server or small network, this series provides 4 to 8 GB capacity and a sustained data transfer rate of 1556 KB/second with data compression. The drives are backward compatible with DDS-1 cartridges, protecting users' investment in previous generation media.

HIGH-END SOLUTION FOR SMALL TO MID-SIZE NETWORKS

With 12 to 24 GB capacity and a sustained data transfer rate of 2.4 MB/second (with data compression), Sony's SDT-9000 drives provide industry-leading capacity and performance for small to mid-size network applications. Based on the latest DDS-3 drive format, this series features Sony's unique Hyper Metal Head™, which reduces error rates by up to 10 times compared to the ferrite Metal-In-Gap (MIG) heads used in conventional DDS-2 drives. The SDT-9000's superior performance, capacity and reliability make it the drive of choice of many of today's major systems integrators.

	FORMAT	INTERNAL	EXTERNAL
Entry-Level (4GB)	DDS-2 w/o DC	SDT-7200/BMI	SDT-S7200/ME
Mid-Range (4-8 GB)	DDS-2 w/ DC	SDT-7000/BMI	SDT-S7000/ME
High-End (12-24 GB)	DDS-3 w/ DC	SDT-9000/BMI	SDT-S9000/ME
*DC = Data Compression			

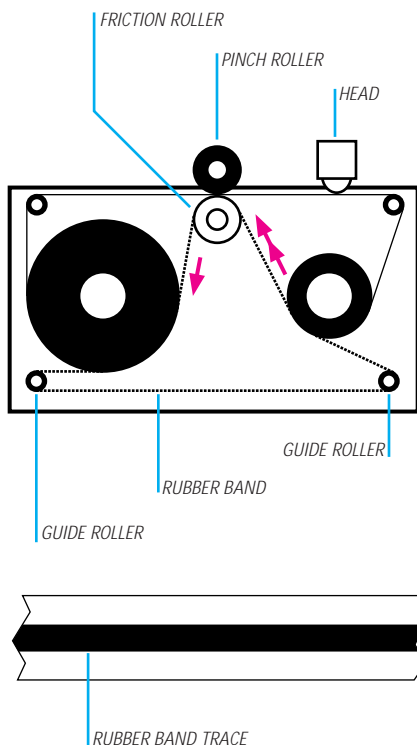


SYSTEM INTEGRATOR SERIES

TAPE TECHNOLOGY COMPARISON: 4MM DDS VS. TRAVAN®/QIC

Some tape drive manufacturers may recommend Travan/QIC (quarter-inch cartridge) tape drives for small to mid-range applications. However, this technology presents some drawbacks when used in applications where performance and reliability are important factors. For example:

- Tape tension, an important factor in maintaining stable read/write operations, is controlled by a friction roller built into the media cartridge instead of the drive. Unlike the electric tension control system designed into DDS drives, the Travan/QIC system uses a reduced-width head which puts high pressure on the tape to maintain tension. This accelerates head wear and raises the risk of media damage and head clogging. In addition, heat generated by friction in the media cartridge can melt the tape.



Digital Data Storage. The solution of choice for high performance and reliability.

SONY VS. HP VS. SEAGATE® COMPARISON CHART

	SONY SDT-7200/BMI	HP C1536	SEAGATE STD-14000N
Technology	DDS-2 without DC	DDS-1 with DC	DDS-1 with DC
Native capacity	4GB	2GB	2GB
Native transfer rate	778 KB/second	183 KB/second	550 KB/second
Self-cleaning mechanism	Yes	No	No
Cleaning cartridge	Included	No	No
Media	DDS-1, DDS-2	DDS-1	DDS-1
24-hour swap program	Yes	Yes	No

	SONY SDT-7000/BMI	HP C1599A	SEAGATE STD-18000N
Technology	DDS-2 with DC	DDS-2 with DC	DDS-2 with DC
Native capacity	4GB	4GB	4GB
Native transfer rate	778 KB/second	510 KB/second	550 KB/second
Self-cleaning mechanism	Yes	No	No
Cleaning cartridge	Included	No	No
Media	DDS-1, DDS-2	DDS-1, DDS-2	DDS-1, DDS-2
24-hour swap program	Yes	Yes	No

	SONY SDT-9000/BMI	HP C1554A	SEAGATE STD-124000N
Technology	DDS-3 with DC	DDS-3 with DC	DDS-3 with DC
Native capacity	12GB	12GB	12GB
Native transfer rate	1.2 MB/second	1.0 MB/second	1.1 MB/second
Head reliability	Hyper Metal laminate*	Ferrite	Ferrite
Self-cleaning mechanism	Yes	Yes	No
Cleaning cartridge	Included	No	No
Media	DDS-1,2,3	DDS-1,2,3	DDS-1,2,3
24 hour swap program	Yes	Yes	No

* Hyper Metal head improves signal to noise ratio by 4db and reduces error rate.

**Based on published specifications available on the world wide web as of 5/18/98.

- A rubber band is incorporated into the media cartridge to generate tape tension and make the tape run. The band leaves a trace on the tape, and sometimes causes spacing between the head and the tape, which can affect performance. As the tape is slipped on the rubber band, debris and dust from the band can cling to the tape, causing noise.
- The Travan/QIC drives are not built for high search speeds. In order to increase search speed, the tape speed must be increased. This causes a rise in temperature caused by friction between the friction/guide rollers and the rubber band, which can cause the tape to melt. In addition, the higher speed causes the rubber band to vibrate and increases noise levels.

Sony's DDS technology avoids all of these problems by controlling tape path within the drive mechanism. The electronic tape tension control and roller guide tape path provide high durability and stable read/write capability. In addition, the DDS design permits high servo tracking and faster tape speed. That's why DDS tape drives are the solution of choice in corporate environments that require higher performance and reliability.



SPECIFICATIONS

	ENTRY-LEVEL	MID-RANGE	HIGH-END
INTERNAL DRIVE	SDT-7200/BMI	SDT-7000/BMI	SDT-9000/BMI
EXTERNAL DRIVE	SDT-S7200/ME	SDT-S7000/ME	SDT-S9000/ME
FORMAT	DDS-2	DDS-2	DDS-3
STORAGE CAPACITY	4.0 GB	8.0 GB*	24.0 GB*
SUSTAINED TRANSFER RATE	778 KB/s	1556 KB/s*	2.4 MB/s*
BURST TRANSFER RATE	10 MB/s	10 MB/s	10 MB/s
(SYNCHRONOUS MAXIMUM)			
LINEAR RECORDING DENSITY	61,000 BPI	61,000 BPI	122,000 BPI
AVERAGE ACCESS TIME	45 seconds (120m tape)	<40 seconds (120m tape)	<45 seconds (125m tape)
DRUM ROTATION SPEED	8,503rpm	8,503rpm	4,252rpm
MTBF (DUTY 20%)*	200,000 POH	200,000 POH	200,000 POH
BUFFER SIZE	1MB	1MB	2MB
INTERFACE	SCSI-2	SCSI-2	SCSI-2
UNCORRECTABLE ERROR RATE	< 10 ⁻¹⁵ bits	< 10 ⁻¹⁵ bits	< 10 ⁻¹⁵ bits
SHOCK (OPERATING)	5.0G peak, 3ms	5.0G peak, 3ms	5.0G peak, 3ms
VIBRATION (OPERATING)	0.25G peak 5 to 500 Hz (swept)	0.25G peak 5 to 500 Hz (swept)	0.25G peak 5 to 500 Hz (swept)
OPERATING TEMPERATURE	41°F to 104°F (5°C to 40°C)	41°F to 104°F (5°C to 40°C)	41°F to 104°F (5°C to 40°C)
OPERATING HUMIDITY	20% to 80%	20% to 80%	20% to 80%
(NON-CONDENSING)			
BMI DRIVE DIMENSIONS**	4.0" W x 1.62" H x 5.75" D	4.0" W x 1.62" H x 5.75" D	4.0" W x 1.62" H x 5.75" D
(W X H X D INCHES)			
ME DRIVE DIMENSIONS**	6.3" W x 2.06" H x 11.81" D	6.3" x 2.06" x 11.81"	6.3" x 2.06" x 11.81"
(W X H X D INCHES)			
BMI DRIVE WEIGHT (LB. OZ)	1 lb 8oz	1 lb 8oz	1 lb 6oz
ME DRIVE WEIGHT (LB, OZ)	4 lb 14oz	4 lb 14oz	4 lb 12oz
MEDIA SUPPORTED	60m DDS-1 90m DDS-1 120m DDS-2	60m DDS-1 90m DDS-1 120m DDS-2	60m DDS-1 90m DDS-1 120m DDS-2 125m DDS-3
OPTIONAL ACCESSORIES	Mounting Kit – 5.25" bezel, rails and screws P/N KIT – 5S1W2 (white) P/N KIT – 5S1B2 (black)		

* Actual capacity and transfer rate depends on type of data being transferred. Although tests have proved some types of data can be compressed up to 4:1, the conservative industry standard 2:1 compression ratio is assumed for comparison.

** Dimensions of naked drive do not include front panel.

*** Sony does not and cannot make any warranty or representation with regard to the mentioned MTBF of any particular unit installed for customer use.

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