

SONY

GY-8240 Series

DTF-2 Tape Drive





The GY-8240 series extends the family of Sony Digital Tape Format (DTF™) computer tape drives by offering high-performance data management capabilities through its unique combination of high-density storage (200 Gigabytes per cassette, native; 518 Gigabytes per cassette, with compression) and extremely high transfer rate (24 Megabytes/sec sustained). Of course, you can count on high data reliability afforded by DTF technology – a hallmark of every Sony product.

The drives are highly suited for a wide range of enterprise-wide computing environments. They are an ideal choice for a variety of applications including mission-critical computer backup and restore, storage area networks, archiving of high-value digital assets, and data acquisition.

Introduction

There are two models in the GY-8240 series. The GY-8240UWD features an Ultra Wide Differential SCSI interface. The GY-8240FC features a native Fibre Channel interface that also supports Storage Area Network (SAN) solutions. Both machines are equipped with the Sony Tele-File System, a newly developed application of flash memory in which tape content is identified on a label attached to the cassette to dramatically reduce the time required for tape load and unload.

The GY-8240 series represents the second generation (DTF-2) of computer tape drives using the Sony Digital Tape Format. DTF is an advanced, intelligent format that assures easy management of large volumes of information using industry-standard SCSI-2 command sets. Its advantages include quick and easy access to large volumes of files on tape through the use of DTF's high speed search and fast load/unload capabilities. For added data reliability, Sony has implemented DTF using advanced metal particle tape. The bit error rate after correction is better than 1×10^{-17} .

Both GY-8240 series machines will play back data written on Sony DTF-1 tape drives (GY-10, GY-2120). Playback is performed at a sustained rate of 24 MB/sec



Features

High Capacity Data Storage

The GY8240 series tape drives provide uncompressed native capacity of 200 Gigabytes (GB) per cassette and an average of 518 GB with the built-in ALDC compression. The high capacity is achieved with high sensitive heads and an ultra accurate tracking system. When integrating DTF-2 technology into the Sony PetaSite Mass Storage Library system, users can attain an uncompressed capacity of more than 11 Petabytes (PB).

Ultra High-Speed Data Recording at 24 MB/s

This outstanding performance is now possible with DTF-2 technology. Both the GY-8240UWD and GY-8240FC tape drives incorporate years of Sony's advanced magnetic recording technology, providing for the extremely high sustained native data rate of 24 Megabytes (MB)/sec -- enabling backups and restores to be accomplished in a fraction of time it take more competing tape drive technologies.

Read Compatibility with DTF-1

The sophisticated tape transport mechanism utilized in the GY-8240 series is specifically designed to provide backwards compatibility with the DTF-1 format tape drives. This design also offers an important advantage -- GY8240 series drives can read tapes recorded by a GY-2120 at its transfer rate of 24 MB/s, so users can now access their tape assets in half the time.

Powerful Error Correction

Combining an advanced double Reed Solomon error correction scheme with a high-performance data buffer memory, automatic read/write re-try and reliable transport system the GY-8240 series maintains a very low bit error rate of $1 \times 10E-17$ or less.

Interface Flexibility

The GY-8240UWD is equipped with an Ultra Wide Differential SCSI interface, while the GY-8240FC model provides a direct Fibre Channel interface.

- **Ethernet Port for Network Support:**
Enables communication to tape robotic libraries for status, diagnostics, log history and firmware updates.
- **RS-232:**
Two serial communication ports for external display, maintenance, tape robotic systems and UPS.

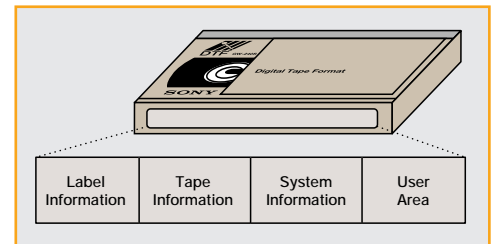
Superior Reliability

To ensure a long operating life, the GY-8240 series incorporates the following features:

- **Long-Life Amorphous recording heads**
- **Automatic Head Cleaning Systems**
- **Precision Tape transport system mounted on a rugged diecast chassis**
- **Sophisticated self-diagnostics**

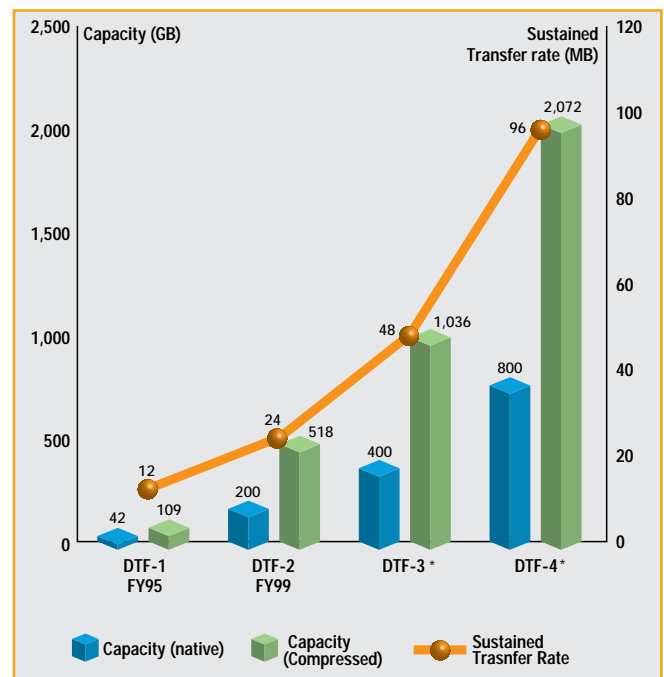
Faster Data Access with Sony Tele-File System

The unique Sony Tele-File System uses a non-contact type of flash memory, in the form of a label attached to a cassette, to hold data relating to both tape and system management. The GY-8240 Series tape drive uses the data written onto the Tele-File memory to dramatically reduce Load and Unload times. The result is that Tele-File significantly reduces the time to access data stored in a GY-8240 tape drive.



Clear migration to the Future

To keep up with the demands caused by today's data explosion, Sony is committed to providing data management professionals with flexible, scalable and reliable technology storage solutions. The DTF format meets and exceeds these requirements. With the development of DTF-2, at 200 GB native capacity and a 24 MB/sec sustained transfer rate, to DTF-3 with 400 GB native capacity and a 48 MB/sec sustained transfer rate, to DTF-4 at 800 GB native capacity and 96 MB/sec sustained transfer rate.



A Clear Migration Path to even Higher Performance
(*projected)

System Components

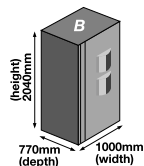
• Tape robotic libraries line-up:

DMS-B9, Auto Loader
(DMS-B9 = 1.8 TB Native Capacity, 4.7 TB Compressed.)
DMS-B35, Mass Storage System
(DMS-B35 = 7 TB Native Capacity, 18.1 TB Compressed.)
DMS-8400 Series, PetaSite Scaleable Mass Storage System

• System configurations of PetaSite®, the DMS-8400 Series:

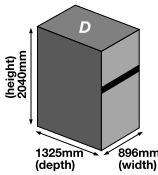
- Basic Console (DMS-8400B)

Control, robotic system, cassette input/output ports.
Data capacity: 3 TB (native), 7.7 TB (compressed)



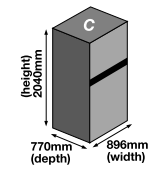
- Tape Drive Console (DMS-8400D)

Cassette storage and drive space for 4 DIR-240/120.
Data capacity: 23 TB (native), 59.5 TB (compressed)



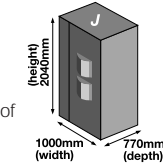
- Cassette Console (DMS-8400C)

Primary storage module: 180 cassettes.
Data capacity: 36 TB (native), 93.2 TB (compressed)



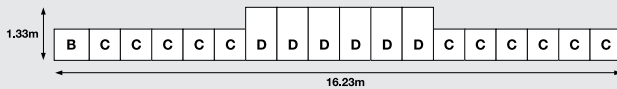
- Junction Console (DMS-8400J)

Provides physical in a system layout, by allowing the contents of a library to be segmented.
Data capacity: 3 TB (native), 7.7 TB (compressed)



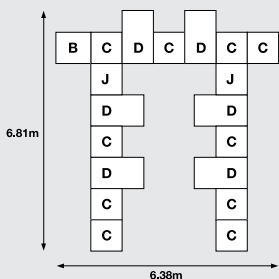
Example configuration-1:

537 TB native and 1.39 PB compressed capacity, 24 GY-8240s



Example configuration-2:

502 TB native and 1.30 PB compressed capacity, 24 GY-8240s



GY-8240UWD Rear Panel

Specifications

Performance

Format	DTF-2 Digital Tape Format
Recording media	1/2-inch metal particle tape
Storage capacity	Large size cassette – 200 GB (Formatted, uncompressed) 518 GB (Compression factor 2.59 to 1) Small size cassette – 60 GB (Formatted, uncompressed) 155 GB (Compression factor 2.59 to 1)
Recording Format	DTF-2 Format
Data transfer rate	GY-8240UWD – 40 MB/s (Burst), 24 MB/s (Sustained) GY-8240FC – 100 MB/s (Burst), 24 MB/s (Sustained)
Bit error rate	1 x 10E-17 bit or less
Head life	Typically greater than 5,000 hours (100% duty cycle)
Drive reliability	MTBF 200,000 hours
Tape reliability	Read or write and rewind 20,000 passes (Note: One pass is one trace on the same part of the tape)
Search speed	1.4 GB/s
Buffer memory	64 MB
Interface	Ultra Wide Differential SCSI x (1) (For GY-8240UWD) Fibre Channel x (1) (For GY-8240FC) [Optical/Multi-mode-fibre, Duplex SC connector, SCSI-over PC/FC-AL] Ethernet port x (1) RS-232C port x (2)
Media	Advanced metal particle 1/2-inch DTF-2 tape cassette L-cassette: GW2-200GL (200 GB) S-cassette: GW2-60GS (60 GB)

General

Power requirements	100 to 240 V AC, 50/60 Hz
Power consumption	Less than 300 W
Current consumption	2.0 to 0.8 A
Operating temperature	5 to 40° C (41 to 104° F)
Operating humidity	20 to 80% (Non-condensing)
Weight	Less than 25 kg (55.12 lbs.)
Dimensions	315(W) x 220(H) x 486(D) mm (12 1/2 x 8 3/4 x 19 1/8 inches) (Excluding protruding parts)

Supplied accessory

Operation manual	(1)
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