TANDBERG DATA

# Tandberg Data
# LTO Half Height Drive

***Leading Performance and Capacity***




**Tandberg Data LTO tape drives offer the best performance, reliability and value for small and medium-sized business users.**

Tape forms the last line of defense in data protection for many organizations, but most importantly tape is the only long-term solution for managing data growth and reducing data storage costs. LTO tape technology is the industry standard for tape storage. Its eight-generation roadmap ensures that data written today can be restored tomorrow.

LTO tape technology is the most economical way for businesses to protect their ever expanding amount of digital data. Significant cost benefits can be achieved by deploying LTO tape technology due to its high capacities, small footprint and low power and cooling requirements. Tandberg Data LTO tape drives are available with compressed capacities up to 6.25TB* and performance up to 1.4 TB/hr* reducing backup and restore times to a minimum.

Tandberg Data LTO tape drives incorporate dynamic variable tape speed matching, allowing drives to constantly adapt speed to match the host/server data rate. This virtually eliminates “backhitching”, improving media life and reducing wear and tear on the tape drives. Tandberg Data provides a full portfolio of LTO tape products including internal, external, rackmount and automation solutions.

Tandberg Data LTO-5 and LTO-6 tape drives support LTFS (Linear Tape File System). LTFS allows LTO-5 and LTO-6 tape drives to connect and operate just like a large hard disk. Users can drag and drop files to and from tape, search for files on tape and even play videos directly from tape. LTFS removes the need for expensive software and greatly simplifies archiving tasks.

Tandberg Data’s extensive product testing program ensures that LTO drives are fully compatible with a wide range of servers, operating systems and backup software. Protect your business data for tomorrow with a Tandberg Data tape solution today.

## Key Benefits

### High Capacity
Up to 6.25TB* of data on a single cartridge

### Leading Performance
Up to 1.4 TB/hr* reducing backup and restore times

### Lower Storage Costs
LTO offers the lowest storage cost of any medium

### Archiving
30-year archival life

### Ease of Use
LTFS support for Windows, Linux and MacOS

### Security
AES 256-bit hardware encryption (LTO-4/5/6)

### Minimize Downtime
3-year Advance Replacement Service Warranty**

* Assumes a compression ratio of 2:1 on LTO-2/3/4/5 & 2.5:1 on LTO-6
** Availability dependent on location



*Choose LTO tape drives for high capacity backup and archiving tasks with the lowest power consumption in the industry.*

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## Specifications

| | Tandberg Data LTO-3 HH | Tandberg Data LTO-4 HH | Tandberg Data LTO-5 HH | Tandberg Data LTO-6 HH |
|---|---|---|---|---|
| Capacity (native/compr.) | 400GB / 800GB* | 800GB / 1.6TB* | 1.5TB / 3.0TB* | 2.5TB / 6.25TB* |
| Transfer Rate (native/compr.) | 60 MB/s / 120 MB/s* | 80 MB/s / 160 MB/s* | 140 MB/s / 280 MB/s* | 160 MB/s / 400 MB/s* |
| Dynamic Speed Matching | 20–60 MB/s / 40–120 MB/s* | 33–80 MB/s / 66–160 MB/s* | 47–140 MB/s / 94–280 MB/s* | 54–160 MB/s / 135–400 MB/s* |
| Memory Buffer Size | 128MB | 128MB | 256MB | 512MB |
| Data Access Speed | 70 sec. | 70 sec. | 70 sec. | 50 sec. |
| Interface Type | Ultra 320 SCSI<br>SAS 3Gb | Ultra 320 SCSI<br>SAS 3Gb<br>FC 4Gb | SAS 6Gb<br>FC 8Gb | SAS 6Gb<br>FC 8Gb |
| Interface Connector SCSI | 68-pin HD (internal)<br>68-pin HD (external) | 68-pin HD (internal)<br>68-pin HD (external) | | |
| Interface Connector SAS | SFF8482 (internal) | SFF8482 (internal)<br>SFF8088 (external) | SFF8482 (internal)<br>SFF8088 (external) | SFF8482 (internal)<br>SFF8088 (external) |
| Interface Connector FC | | | LC-Port (internal)<br>LC Port (external) | LC-Port (internal) |
| Data Compression | 1KB (2:1) | 1KB (2:1) | 1KB (2:1) | 16KB (2.5:1) |
| Encryption | N/A | AES 256-bit | AES 256-bit | AES 256-bit |
| LTFS | N/A | N/A | Yes | Yes |
| Recording Format | LTO Ultrium 3, LTO Ultrium 2, LTO Ultrium 1 (read only) | LTO Ultrium 4, LTO Ultrium 3, LTO Ultrium 2 (read only) | LTO Ultrium 5, LTO Ultrium 4, LTO Ultrium 3 (read only) | LTO Ultrium 6, LTO Ultrium 5, LTO Ultrium 4 (read only) |
| **Reliability** | | | | |
| MTBF Hours (100% duty cycle) | 250,000 hours @ 100% duty cycle | 250,000 hours @ 100% duty cycle | 250,000 hours @ 100% duty cycle | 250,000 hours @ 100% duty cycle |
| Head Life | 60,000 tape running hours | 60,000 tape running hours | 60,000 tape running hours | 60,000 tape running hours |
| Hard Error Rate | 1 x $10^{(-17)}$ bits | 1 x $10^{(-17)}$ bits | 1 x $10^{(-17)}$ bits | 1 x $10^{(-17)}$ bits |
| **Environmental Specifications** | | | | |
| Temperature (Operating) | 10° – 40°C (50° – 95°F) | 10° – 40°C (50° – 95°F) | 10° – 40°C (50F° – 95°F) | 10° – 40°C (50° – 95°F) |
| Temperature (Non-operating) | -40° – 66°C (-40° – 151°F) | -40° – 66°C (-40° – 151°F) | -40° – 66°C (-40° – 151°F) | -40° – 66°C (-40° – 151°F) |
| Relative Humidity (Operating) | 20 – 80% (non-condensing) | 20 – 80% (non-condensing) | 20 – 80% (non-condensing) | 20 – 80% (non-condensing) |
| Relative Humidity (Non-operating) | 10 – 95% (non-condensing) | 10 – 95% (non-condensing) | 10 – 95% (non-condensing) | 10 – 95% (non-condensing) |
| **Power Requirements** | | | | |
| Idle | 13 W | 13 W | 7 W | 4 W |
| Typical | 20 W | 20 W | 20 W | 29 W |
| Maximum | 33 W | 33 W | 33 W | 39 W |
| Power Supply/ Required (int) | 5V DC, 2.5A, 12V, 0.7A | 5V DC, 2.5A, 12 V, 0.7A | 5V DC, 2.5A, 12 V, 0.7A | 5V DC, 3.7A, 12 V, 0.9A |
| Certification | CSA Certification to C22.2, No. 60950 (cCSAus), TUV EN60950 (IEC 60950), CE Declaration of Conformity, FCC 47 CFR Parts 15, NOM, VCCI. C-TICK, RRL, BSMI, GOSH CB Certificate and Report (IEC 60950) | | | |
| Warranty | 3-years Advance Replacement Service Warranty** | | | |

* Assumes compression ratio 2:1 on LTO-2/3/4/5 & 2.5:1 on LTO-6
** Availability dependent on location
‡ The LTO-5 HH FC external tape drive should not be operated in an environment where the temperature is greater than 35°C (95°F).

**About Tandberg Data**

Tandberg Data is a leading global supplier of data protection solutions for small and medium-sized businesses. The company's wide range of cost-effective storage products and services provides customers with best-in-class tape, disk, removable disk and software solutions for backup, archiving and disaster recovery. These solutions are marketed through a global channel of qualified resellers, distributors and major server OEMs. An extensive service and support network supports all Tandberg Data products worldwide.

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Tandberg Data GmbH
Feldstrasse 81
44141 Dortmund
Germany
Tel: **00 800 8263 2374** (00 800 TANDBERG)
Fax: +49 (0) 231 5436 - 111
salesemea@tandbergdata.com
www.tandbergdata.com/emea

Tandberg Data Corporation
10225 Westmoor Dr., Ste. 125
Westminster, CO 80021
USA
Tel: **(800) 392-2983** Toll Free
Fax: 303.417.7170
sales@tandbergdata.com
www.tandbergdata.com/us

Tandberg Data (Asia) Pte Ltd
Trivex Building,
8 Burn Road, #09-02/03
Singapore 369977
Tel: **+65 6593 4700**
Fax: +65 6281 7358
salesapac@tandbergdata.com
www.tandbergdata.com/apac

Tandberg Data (Japan) Inc.
Dai 6 Ito Building 5F,
4-4-7 Ebisu, Shibuya-ku,
Tokyo, 150-0013
Tel: **+81 3 5475 2140**
Fax: +81 3 5475 2144
TDJ_sales@tandbergdata.com
www.tandbergdata.com/jp



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