**TANDBERG DATA**
Securing your Information

*Tandberg Data LTO-3, LTO-4 & LTO-5
HH SAS External Tape Drives*

QUICK
START

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EH917-90902

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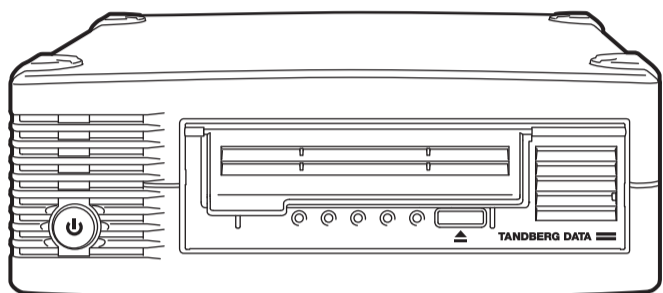
This quick start guide describes how to connect and install an external Tandberg Data LTO-3, LTO-4 or LTO-5 SAS tape drive to a server.

⚠️ **WARNING:** To avoid personal injury or damage to the server or tape drive, disconnect your server from the mains power supply before installing the tape drive. To avoid damage to server or tape drive observe all recommended anti-static and power-grounding precautions, as specified in your server and tape drive manuals.

## 1 Refer to www.tandbergdata.com

Before you install your tape drive, always refer to **www.tandbergdata.com** to find out:

- Is the SAS connection on your server supported, or do you need to purchase an additional SAS HBA.
- What SAS cables (not supplied) are required to complete the installation.

## 2 Connect to an external SAS port

The following instructions are valid **ONLY** for servers with an HBA that supports external SAS ports. You must purchase a supported HBA and cable, if you do not already have a SAS card installed. See **www.tandbergdata.com** for recommended products. You need a spare PCI slot for the new HBA.

### 1. Connect the SAS cable to the server

SAS connector

SAS Cable
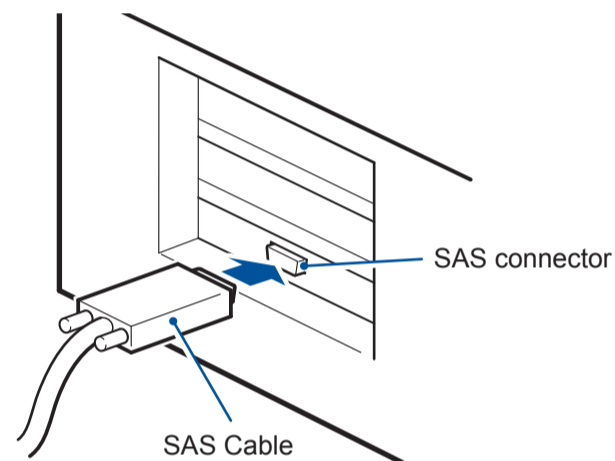
### 2. Connect the SAS and power cables to the tape drive (tape drive interface: SFF-8088)

SAS cable

Power switch

Power connector
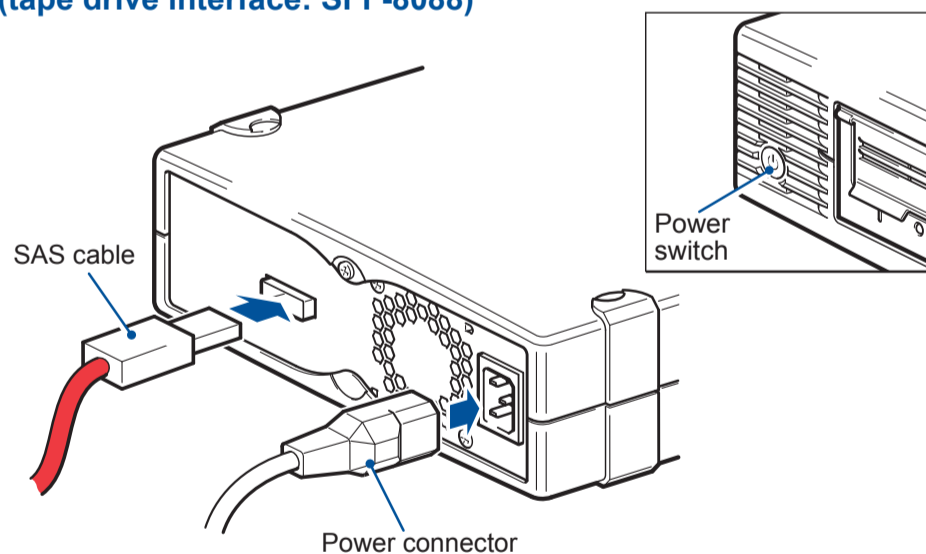
### 3. Power up the tape drive and server

Switch on the tape drive and power up the server. Watch the boot screen carefully after installation. Check to see that the new SAS tape drive is listed in the boot sequence.

If there are any error or unexpected messages go back and check the SAS cabling carefully.

### 4. Install drivers

For Windows systems, download the latest drivers from **www.tandbergdata.com**. For other operating systems, patch to the latest version of the operating system, following the instructions in the patch documentation.

### 5. Upgrade backup software

Always **upgrade** your software application to ensure it works correctly with the tape drive. We do **NOT** recommend native backup applications, such as Windows Backup, because they do not support the full features of the tape drive and may cause performance problems.

📝 **NOTE:** Some backup applications require you to use their own drivers. Refer to the documentation of your software application to ensure you are using the recommended driver.

## 3 Hardware encryption and your Tandberg Data LTO-5 and LTO-4 tape drive

Your Tandberg Data LTO-5 and LTO-4 tape drive provides the ability to hardware encrypt your data, applying the strongest level of AES industry-standard encryption and protecting the data from unauthorized access and use. Encryption is supported only on Tandberg Data LTO-5 3 TB and LTO-4 1.6 TB media; media encrypted on a Tandberg Data LTO-5 and LTO-4 drive can only be read on a compatible Ultrium tape drive that supports hardware encryption.

Hardware encryption can be used with or without compression and without speed or capacity penalties.

**IMPORTANT:** Hardware encryption is a powerful feature, but should be used with care. If you need to import your media onto another machine or to recover after disaster you will be required to enter an encryption key.

- Hardware encryption is turned off by default and is switched on by settings in your backup application, where you also generate and supply the encryption key.
- Your backup application must support hardware encryption for it to work. The software supplied with the tape drive provides this support. See **www.tandbergdata.com** for an up-to-date list of backup software.
- You should keep a record or backup of your encryption keys and store them in a secure place separate from the computer running the backup software.
- If you are unable to supply the key when requested to do so, neither you nor Tandberg Data Support will be able to access the encrypted data.

## 4 Choosing and looking after media

Your high-performance tape drive works best with high-performance Tandberg Data LTO media. For optimum performance always use a data cartridge that matches the specification of your tape drive (see table).

**Table: Tandberg Data LTO data cartridge compatibility**

|  | Tandberg Data LTO-5 HH | Tandberg Data LTO-4 HH | Tandberg Data LTO-3 HH |
|---|---|---|---|
| LTO-5 3 TB* | Read/Write (Recommended) | No | No |
| LTO-5 3 TB* WORM | Write Once Read Many (Recommended) | No | No |
| LTO-4 1.6 TB* | Read/Write | Read/Write (Recommended) | No |
| LTO-4 1.6 TB* WORM | Write Once Read Many | Write Once Read Many (Recommended) | No |
| LTO-3 800 GB* | Read only | Read/Write | Read/Write (Recommended) |
| LTO-3 800 GB* WORM | Read only | Write Once Read Many | Write Once Read Many (Recommended) |
| LTO-2 400 GB* | No | Read only | Read/Write |
| LTO-1 200 GB* | No | No | Read only |

\* Capacity assumes 2:1 compression.

The recommended cleaning cartridge is the Tandberg Data LTO universal cleaning cartridge. This cartridge is designed to work with any Ultrium drive and may be used for up to 50 cleans.

### It pays to look after your media

Many tape drive and backup failures are caused by damaged or badly handled tape media.

- Keep media in the case provided.
- Follow the temperature, humidity and acclimitization guidelines on the media packaging.
- Avoid dropping it or rough handling, as this is likely to damage the cartridge.
- Inspect it regularly for damage.
- Do not exceed normal cartridge life (260 full volume backup or restore operations).

For detailed information on media care and best practice and to order online, refer to **www.tandbergdata.com**.
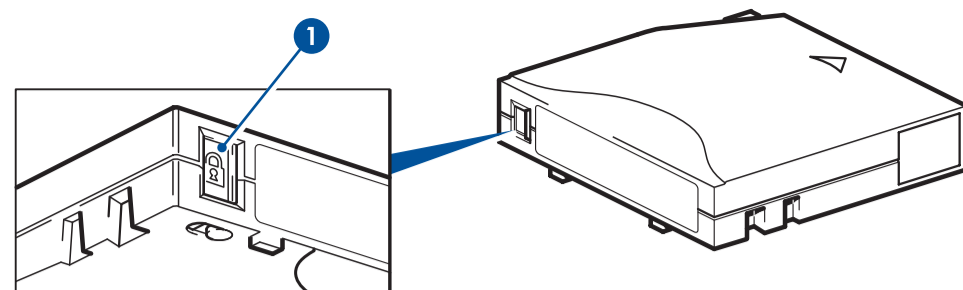


**1** Write-protect switch

## 5 Understanding the LEDs
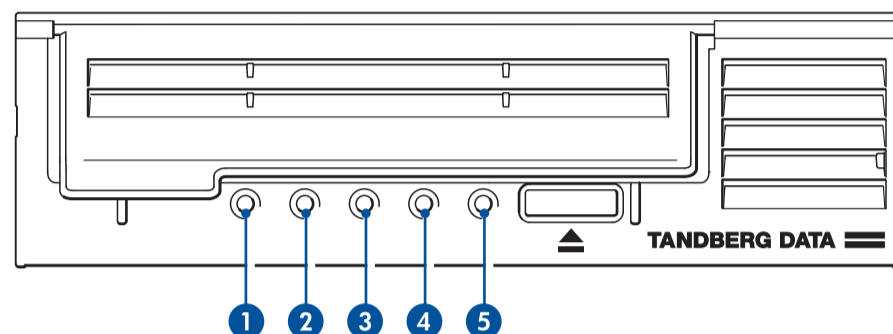


### LTO-5 drives only

**1 Encryption** – blue/amber
- On (blue or amber): at power on
- Off: drive is idle with no encryption key
- Off with Ready LED flashing: drive is reading/writing unencrypted data or unloading cartridge
- On (blue): drive is idle with encryption key
- On (blue) with Ready LED flashing: drive is reading/writing encrypted data
- Blue and Amber flashing alternately: encryption or decryption error

**NOTE:** The Encryption LED only appears on the LTO-5 tape drive.

### LTO-5, LTO-4 and LTO-3 drives

**2 Clean** – amber
- On: cleaning cartridge in use
- Off: the drive does not require cleaning
- Flashing: the drive needs cleaning

**3 Tape** – amber
- Off: no fault has been detected
- Flashing: the cartridge currently in the drive is faulty (damaged or unsupported). Discard the cartridge.

**4 Drive** – amber
- Off: no fault has been detected
- Flashing: the drive mechanism has detected a hardware error

**5 Ready** – green
- On: the drive is ready for use
- Off: the drive power is off or there was a failure during self-test
- Flashing: the drive is busy

## 6 Other sources of information

There is a more detailed "User Guide" on **www.tandbergdata.com**.

If you need technical support or have any problem with your LTO-3 HH, LTO-4 HH or LTO-5 HH tape storage solution, phone, fax and addresses can be found under **www.tandbergdata.com SUPPORT**.