

## IBM TS2900 Tape Autoloader

### Product Guide

IBM TS2900 Tape Autoloader for Lenovo (Machine Type 6171) is an entry-level compact 1U tape unit that offers IBM tape reliability, density, and performance for entry-level and compact tape libraries at a cost-effective price.

With a capacity of nine cartridges, the TS2900 Tape Autoloader is a rack-mountable or deskside unit that contains a single IBM LTO Ultrium half-high SAS tape drive. The choice of the tape drives includes:

- IBM LTO Ultrium 9 Half-High SAS Tape Drive (Model S9H)
- IBM LTO Ultrium 8 Half-High SAS Tape Drive (Model S8H)
- IBM LTO Ultrium 7 Half-High SAS Tape Drive (Model S7H)

The TS2900 is an ideal solution if you need an entry-level larger capacity or higher performance tape backup with or without random access and for tape automation used along with Lenovo servers.



Figure 1. TS2900 Tape Autoloader

### Did you know?

The TS2900 Tape Autoloader uses high-density slot technology that allows you to maximize available backup storage capacity by offering the nine-cartridge magazine in only 1U of rack space.

Featuring the latest LTO Ultrium 9 technology, the TS2900 Tape Autoloader provides up to 405 TB of 2.5:1 compressed backup storage capacity using nine 18 TB LTO 9 cartridges.

With IBM LTO Tape offerings that are available from Lenovo, Lenovo can be your trusted partner that offers "one stop shop" and single point of contact for delivery of leading edge technologies and innovations from Lenovo and other leading IT vendors. These offerings can satisfy the wide range of your end-to-end IT infrastructure needs, including handheld devices, notebooks, personal computers, servers, storage, networking, services, management software, and financing.

## Key features

The TS2900 delivers the following features:

- Adherence to LTO specifications.
- Support for one half-height LTO Ultrium 9, 8, 7 SAS tape drive.
- Native cartridge capacity of up to 18 TB (Ultrium 9), 12 TB (Ultrium 8), 9 TB (Ultrium 7 initialized LTO 8 Type M), 6 TB (Ultrium 7).
- Native data transfer rate of up to 300 MB/s (Ultrium 9, 8 or 7).
- Support for LTO 9 media specification tape cartridge compressed capacity of up to 45 TB, 30 TB for LTO8, and 15 TB for LTO7 with 2.5 to 1 compression per cartridge
- 12 Gbps SAS interface attachment
- Support for media partitioning and self-describing tape
- Support for encryption capabilities with IBM Security™ Guardium(R) Key Lifecycle Manager (GKLM)
- One removable magazine providing nine cartridge slots, including a single I/O station
- A bar code reader that is standard and enables operation of the TS2900 in sequential or random access mode
- Remote management capabilities to enable remote administration of the TS2900 through a web interface
- Optional features such as rack mount kits and additional cartridge magazines
- Adherence to LTO Generation 9 media specifications

The features in the IBM LTO 9 tape drive:

- Servo and track layout technology: There are 6,656 data tracks in LTO 9 versus 3,584 data tracks in LTO 8. The high-bandwidth servo system features a low-mass servo to help more effectively track servo bands and improve data throughput with damaged media in less-than-optimal shock and vibration environments.
- Surface Control Guiding Mechanism: Designed to guide the tape along the tape path in the LTO 9, 8, 7, and 6 tape drive. This method is designed to use the surface of the tape, rather than the edges, to control tape motion to reduce tape damage (especially to the edges of the tape) and tape debris, which comes from the damaged edges and accumulation in the head area.
- Robust drive components optimized for automation environments: With the most robust components available, steel ball bearings in loader, robust leader block design, and single circuit card, the drives offer enhanced reliability and prolonged life.
- Separate writing of multiple filemarks: This is designed to cause any write command of two or more filemarks to cause a separate data set to be written containing all filemarks after the first.
- LTO Data Compression (LTO-DC): The LTO 9 uses LTO-DC, which is an implementation of a Lempel-Ziv class 1 (LZ-1) data compression algorithm. LTO-DC is an extension of Adaptive Lossless Data Compression (ALDC) and an improvement over previous IBM lossless compression algorithms. Patented "Scheme-Swapping" compression from IBM is designed to look ahead at incoming data and determine the most efficient storage method (either ALDC or pass-through mode) to help optimize data compression and increase data throughput. The compressed ratio is up to 2.5 to 1 for LTO 9.
- LTO Cartridge Memory (LTO-CM): Contained within the LTO data cartridge is the LTO-CM, which is a passive, contactless silicon storage device that is physically a part of the cartridge. The LTO-CM is designed to hold information about that specific cartridge, the media in the cartridge, and the data on the media. The storage capacity of the Generation 9 LTO-CM is 16,320 bytes. Communication between the drive and the LTO-CM is through a low-level RF field transmitted by the drive to the cartridge.

- Statistical Analysis and Reporting System (SARS): The LTO 9 tape drive uses SARS to help isolate failures between media and hardware. SARS uses the cartridge performance history saved in the Cartridge Memory module and the drive performance history kept in the drive flash to help determine the likely cause of failure. SARS is designed to cause the drive to request a cleaner tape, to mark the media as degraded, and to indicate that the hardware has degraded.
- Highly integrated electronics using IBM-engineered copper technology: This technology is designed to reduce the total number of components in the drive, help lower chip temperatures, and reduce power requirements, resulting in a more reliable drive. The ninth-generation drive electronics are designed to provide error correction of soft errors in the memory arrays in data and control paths.

## Components and connectors

The following figure shows the front of the TS2900 Tape Autoloader.



Figure 2. Front view of the TS2900 Tape Autoloader

The following figure shows the rear of the TS2900 Tape Autoloader.

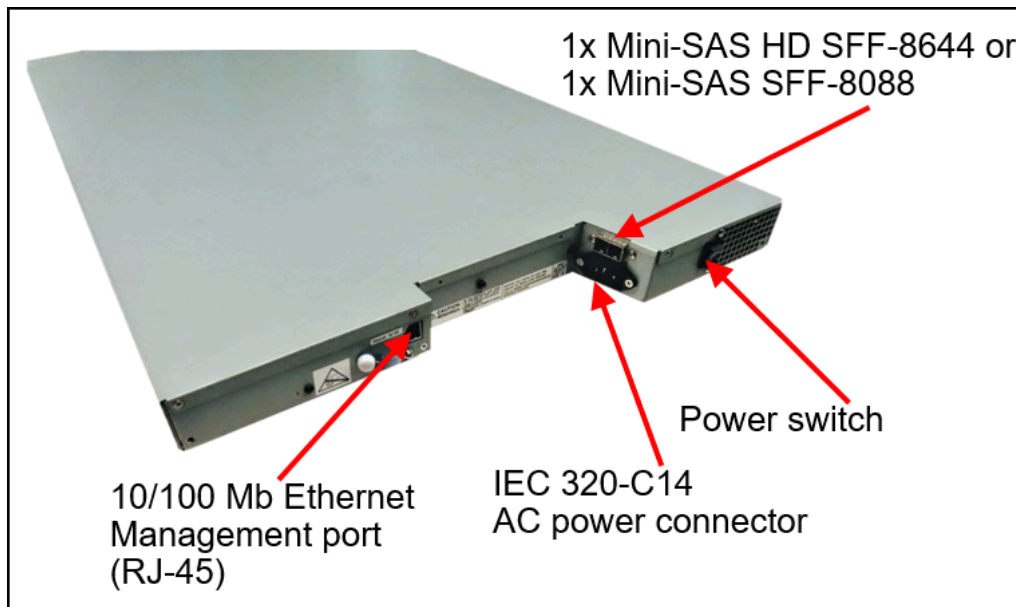


Figure 3. Rear view of the TS2900 Tape Autoloader

## System specifications

The following table lists the TS2900 Tape Autoloader system specifications.

Table 1. System specifications

Attribute	Specification
Form factor	1U rack mount or standalone

Attribute	Specification
Drive technology	LTO Ultrium 9, 8, 7 half-high drives
Drive interface	The Ultrium 9 SAS drive uses the SFF-8644 connection at the drive end and a SFF-8644 connection at the host adapter end. The Ultrium 8 and 7 SAS drives use the SFF-8088 connection at the drive end and the SFF-8088 connection at the host adapter end.
Number of drives	1
Number of cartridge slots	9
Cartridge capacity (native / compressed)	<ul style="list-style-type: none"> <li>LTO 9 (L9): 18 TB / 45 TB*</li> <li>LTO 8 (L8): 12 TB / 30 TB*</li> <li>LTO 7 initialized LTO 8 Type M (M8): 9 TB / 22.5 TB*</li> <li>LTO 7 (L7): 6 TB / 15 TB*</li> </ul>
Total backup capacity (native / compressed)	<ul style="list-style-type: none"> <li>LTO 9 (L9): Up to 162 TB / up to 405 TB*</li> <li>LTO 8 (L8): Up to 108 TB / up to 270 TB*</li> <li>LTO 7 (M8): Up to 81 TB / up to 202.5 TB*</li> <li>LTO 7 (L7): Up to 54 TB / up to 135 TB*</li> </ul>
Data transfer rate (native / compressed)	<ul style="list-style-type: none"> <li>LTO 9: Up to 300 MB/s up to 750 MB/s*</li> <li>LTO 8: Up to 300 MB/s / up to 750 MB/s*</li> <li>LTO 7: Up to 300 MB/s / up to 750 MB/s*</li> </ul>
Software features	Transparent LTO encryption (optional).
Security features	Secure Socket Layer (SSL), user level security, LTO encryption (optional).
Management interfaces	<ul style="list-style-type: none"> <li>Operator panel</li> <li>1x 10/100 Mbps Ethernet port (UTP, RJ-45) for remote management: Web-based GUI; SNMP and email notifications</li> </ul>
Cooling	Fixed internal fans
Power supply	One 82 W AC fixed power supply with IEC 320-C14 power connector
Hot-swap parts	None
Dimensions	Height: 44 mm (1.7 in.); width: 483 mm (19.0 in.), depth: 850 mm (33.5 in.)
Weight	13 kg (28.7 lb)
Warranty	One-year customer-replaceable unit and onsite warranty with 9x5 next business day terms.
Service and support	Optional warranty service upgrades are available through Lenovo Services: 24x7 coverage, 2-hour or 4-hour response time, committed repair (select countries), up to 5 years of warranty extension, installation services.
Host operating systems	Microsoft Windows Server, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES). For a full list of supported operating systems, refer to the <a href="#">System Storage Interoperation Center</a>

\* With 2.5:1 compression ratio

\* With 2:1 compression ratio

## Models

The following table lists the ordering information for the TS2900 Tape Autoloader models.

Table 2. TS2900 models

Description	Part number	Machine Type-Model	Feature code
IBM TS2900 Tape Autoloader w/LTO9 HH SAS	6171S9R	6171-S9H	BLVX
IBM TS2900 Tape Autoloader w/LTO8 HH SAS	6171S8R	6171-S8H	B1EU

The part numbers for the TS2900 Tape Autoloader models include the following items:

- One TS2900 Tape Autoloader with the half-height LTO SAS tape drive (LTO 9, LTO 8, LTO 7) and with the Bar Code Reader
- One removable nine-cartridge magazine
- One universal cleaning cartridge
- Documentation package

**Configuration notes:**

- Rack mount kit or standalone installation kit are not included; one of the kits must be ordered with the TS2900 unit (for ordering information, see the following table).
- Rack mount kit includes one 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable, and a line cord also can be ordered, if needed (for ordering information, see [Power cables](#)).
- Standalone kit does not include a power cable; it must be ordered with the TS2900 unit (for ordering information, see [Power cables](#)).

The following table lists the rack mount and stand-alone (deskside) kits for the TS2900 unit (one of the kits must be ordered with the autoloader).

Table 3. Rack mount and standalone kits

Description	Part number	Feature code	Maximum quantity
6171 Rack Mount Kit	00NA013	7006	1
6171 Deskside Covers	00NA015	AS1D	1

A SAS cable is required to attach an LTO Ultrium SAS Tape Drive to a SAS host adapter.

The SAS Half-High tape drives that are installed into the TS2900 tape autoloader come with either one SFF-8644 interface for model S9H or one SFF-8088 interface for all other models. This interface is on the rear of the TS2900, above the power connection. on the back of the TS2900 tape drive. Verify that the HBA of your server is supported. Check the IBM interoperability matrix at the [IBM System Storage Interoperation Center \(SSIC\)](#).

The following table lists the supported cable options for the TS2900 Tape Autoloader with an LTO9 tape drive installed.

Table 4. SAS cables for LTO9

Description	Part number	Feature code	Maximum quantity
SAS connectivity cables: Mini-SAS HD (HBA SFF-8644 host) to Mini-SAS HD (HBA SFF-8644 tape drive)			
3 m Mini-SAS HD/Mini-SAS HD 1x Cable (from HBA with SFF-8644 to tape drive (LTO-9) with SFF-8644)	02JH830	BLW3	1
1.5 m Mini-SAS HD/Mini-SAS HD 1x Cable (from HBA with SFF-8644 to tape drive (LTO-9) with SFF-8644)	02JH831	BLW4	1
SAS connectivity cables: Mini-SAS HD (HBA SFF-8644 host) to Mini-SAS (HBA SFF-8088 tape)			
4m Mini-SAS HD/Mini-SAS 1X Cable (from tape drive (LTO-9) with SFF-8644 to HBA with SFF-8088).	00NV419	AS10	1

The following table lists the supported cable options for the TS2900 Tape Autoloader with an LTO8 or earlier tape drive installed.

Table 5. SAS cables for LTO8 and LTO7

Description	Part number	Feature code	Maximum quantity
SAS connectivity cables: Mini-SAS (SFF-8088 host) to Mini-SAS (SFF-8088 tape)			
2 m Mini-SAS/Mini-SAS 1x Cable (host SFF-8088 to target SFF-8088)	00NA009	AS0Z	1
Mini-SAS to Mini-SAS Cable (5.5 m)	00NV418	AS11	1*
SAS connectivity cables: Mini-SAS HD (SFF-8644 host) to Mini-SAS (SFF-8088 tape)			
HD-SAS Cable to Mini-SAS (4 m)	00NV419	AS10	1

\* Not supported with the TS2900 with the LTO 8 tape drive.

## Tape media

The TS2900 ships with one removable tape magazine with nine cartridge slots that include a single I/O station (if enabled). Extra removable tape magazines can be ordered with the TS2900, if needed.

The following table lists tape media options and extra magazines that can be ordered for the TS2900.

Table 6. Tape media and extra magazines

Description	Part number	Feature code	Supported tape drive types
Cleaning cartridge			
Ultrium Cleaning Cartridge (universal)	00NA017	AS1E	All drives
Data cartridges			
Ultrium 9 Data Cartridges 5-Pack	02JH833	BLW1	LTO 9
Ultrium 8 Data Cartridges 5-Pack	01KP955	B1EW	LTO 9, LTO 8
LTO M8 Uninitialized Data Cartridges 5-Pack	02JH005	B5XL	LTO 8
Ultrium 7 Data Cartridges 5-Pack	00WF771	ATNZ	LTO 8, LTO 7
Optional magazines			
6171 Additional Tape Magazine	00NA019	AS1K	All drives

LTO Ultrium tape drives support the following backward compatibility for the previous generations of tape media:

- LTO 9 Tape Drives can read and write LTO 9 and LTO 8 data cartridges.
- LTO 8 tape drives can read and write LTO 8, LTO 7, and LTO 7 initialized LTO 8 Type M data cartridges.
- LTO 7 tape drives can read and write LTO 7 and LTO 6 data cartridges, and can read LTO 5 data cartridges.

### Configuration notes:

- A 5-Pack of the Ultrium 9, 8 or 7 Data Cartridges includes five unattached barcode labels.
- An LTO 7 initialized LTO 8 Type M data cartridge is a new (unused) LTO 7 data cartridge labelled and initialized to support 9 TB native storage capacity in the LTO 8 tape drive. Once initialized, an LTO 8 Type M cartridge cannot be used in the LTO 7 tape drives, and it cannot be changed back to a 6 TB LTO 7 cartridge.
- LTO M8 Uninitialized Data Cartridges 5-Pack (02JH005) includes five uninitialized LTO 7 data cartridges and five M8 barcode labels. These cartridges will be automatically initialized by the tape library firmware while under the control of ISV applications that recognize the M8 barcode label.

## Software

IBM Ultrium 9, 8, and 7 SAS tape drives are encryption-capable and support the following modes of encryption management:

- Application Managed (available with third-party software such as IBM Spectrum Protect)
- Library Managed (available for Linux and Windows; requires the IBM Security Key Lifecycle Manager (SKLM))

Application Managed Encryption does not require a license. Library Managed Encryption requires an optional Transparent LTO Encryption license that is listed in the following table.

Table 7. Software options

Description	Part number	Feature code	Maximum quantity
6171 Transparent LTO Encryption	00NA011	AS19	1

## Power cables

If the TS2900 is ordered with the rack mount kit, it includes one 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable. A line cord also can be ordered, if needed.

If the TS2900 is ordered with the stand-alone (deskside) kit, it does not include a power cable. A line cord or a rack power cable must be ordered with the TS2900.

The part numbers and feature codes to order the power cables (one power cable per TS2900) are listed in the following table.

Table 8. Power cables

Description	Part number	Feature code
Line cords		
2.8m, 10A/120V, C13 to NEMA 5-15P (US) Line Cord	00NA027	AS29
2.8m, 10A/230V, C13 to CEE7-VII (Europe) Line Cord	00NA029	AS2A
2.8m, 10A/230V, C13 to DK2-5a (Denmark) Line Cord	00NA031	AS2B
2.8m, 10A/230V, C13 to BS 1363/A (UK) Line Cord	00NA033	AS2C
2.8m, 10A/230V, C13 to SI 32 (Israel) Line Cord	00NA035	AS2D
2.8m, 10A/230V, C13 to SEV 1011-S24507 (Sws) Line Cord	00NA037	AS2E
2.8m, 10A/230V, C13 to SABS 164 (South Africa) Line Cord	00NA039	AS2F
2.8m, 10A/230V, C13 to CEI 23-16 (Italy) Line Cord	00NA041	AS2G
2.8m, 10A/230V, C13 to AS/NZS 3112 (Aus/NZ) Line Cord	00NA043	AS2H
2.8m, 10A/208V, C13 to NEMA 6-15P (US) Line Cord	00NA045	AS2J
2.8m, 10A/220V, C13 to IRAM 2073 (Argentina) Line Cord	00NA047	AS2K
2.8m, 10A/220V, C13 to CNS 10917-3 (Taiwan) Line Cord	00NA049	AS2L
2.8m, 10A/220V, C13 to GB 2099.1 (China) Line Cord	00NA051	AS2M
2.8m, 10A/110V, C13 to CNS 10917-3 (Taiwan) Line Cord	00NA053	AS2N
2.8m, 12A/100V, C13 to JIS C-8303 (Japan) Line Cord	00NA055	AS2P
2.8m, 12A/220V, C13 to KSC 8305 (S. Korea) Line Cord	00NA057	AS2Q
2.8m, 10A/240V, C13 to IS 6538 (India) Line Cord	00NA059	AS2R

Description	Part number	Feature code
2.8m, 10A/220V, C13 to NBR 6147 (Brazil) Line Cord	00NA061	AS2T
Rack power cord		
4.3m, 10A/100-250V, C13 to IEC 320-C14 Rack Power Cable	00NA063	AS2U

## Physical specifications

The TS2900 Tape Autoloader has the following dimensions and weight (approximate):

- Height: 44 mm (1.7 in.)
- Width: Bezel: 483 mm (19.0 in.); chassis: 445 mm (17.5 in.)
- Depth: 850 mm (3.5 in.)
- Weight: 13 kg (28.7 lb)

## Operating environment

The TS2900 Tape Autoloader is supported in the following environment:

- Air temperature:
  - Operating: 10 °C - 38 °C (50 °F - 100 °F)
  - Non-operating: 1 °C - 60 °C (34 °F - 140 °F)
  - Maximum altitude: 2,500 m (8,202 ft)
- Humidity:
  - Operating: 20% - 80%
  - Non-operating: 10% - 90%
- Electrical power:
  - 100 V AC - 240 V AC (4.0 A to 1.5 A)
  - Frequency: 50 Hz / 60 Hz
  - Power consumption: 110 watts
- Acoustical noise emission:
  - 6.6 bels (idling)
  - 6.8 bels (operating)

## Warranty upgrades and post-warranty support

The TS2900 Tape Autoloader (machine type 6171) has a one-year CRU and onsite limited warranty.

Our global network of regional support centers offers consistent, local-language support enabling you to vary response times and level of service\* to match the criticality of your support needs:

- **Standard Next Business Day** – Best choice for non-essential systems requiring simple maintenance.
- **Premier Next Business Day** – Best choice for essential systems requiring technical expertise from senior-level Lenovo engineers.
- **Premier 24x7 4-Hour Response** – Best choice for systems where maximum uptime is critical.
- **Premier Enhanced Storage Support 24x7 4-Hour Response** – Best choice for storage systems where maximum uptime is critical.

For more information, consult the brochure [Lenovo Operational Support Services for Data Centers Services](#).

\* Some service levels may not be available in all markets. Contact your sales representative for more information.

## Tape media warranty

When purchased with a supported tape drive or tape library, the tape media assumes the base warranty and any warranty upgrade. For standalone media purchases, the following warranty applies.

#### IBM BRAND STORAGE MEDIA STATEMENT OF WARRANTY

##### LIMITED LIFETIME WARRANTY AND LIMITATION OF REMEDIES:

Product is warranted against manufacturing and material defects for the useful life of the product, or until end of support of the product, whichever comes first. IBM warrants that IBM product is free from defects in material and manufacture at the time of purchase. If any defect in material or manufacture appears after the date of purchase, IBM's entire liability, and your exclusive remedy is, at IBM's option, either (a) repair, or (b) replacement of the product.

This warranty does NOT apply to failure of the IBM product resulting from misuse, abuse, accident, neglect or mishandling, improperly adjusted or maintained drives, incorrect environments, or wear from ordinary use.

THIS WARRANTY IS MADE IN LIEU OF ALL OTHER RIGHTS, CONDITIONS AND WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

## Lenovo TruScale

Lenovo TruScale XaaS is your set of flexible IT services that makes everything easier. Streamline IT procurement, simplify infrastructure and device management, and pay only for what you use – so your business is free to grow and go anywhere.

Lenovo TruScale is the unified solution that gives you simplified access to:

- The industry's broadest portfolio – from pocket to cloud – all delivered as a service
- A single-contract framework for full visibility and accountability
- The global scale to rapidly and securely build teams from anywhere
- Flexible fixed and metered pay-as-you-go models with minimal upfront cost
- The growth-driving combination of hardware, software, infrastructure, and solutions – all from one single provider with one point of accountability.

For information about Lenovo TruScale offerings that are available in your region, contact your local Lenovo sales representative or business partner.

## Regulatory compliance

The TS2900 Tape Autoloader conforms to the following regulations:

- FCC: Verified to comply with Part 15 of the FCC Rules, Class A
- Canada ICES-003, Class A
- European Union Council Directive 2004/108/EC
- EN 55022, Class A
- Japan VCCI Class A statement
- People's Republic of China Class A statement
- Taiwan Class A statement
- Korea KCC Class A statement

## Interoperability

Lenovo provides end-to-end storage compatibility testing to deliver interoperability throughout the network. The TS2900 Tape Autoloader supports attachment to Lenovo servers by using SAS storage connectivity.

**Note:** End-to-end storage configuration support (including adapters and operating systems) *must* be verified through the [System Storage Interoperation Center \(SSIC\) for the TS2900](#).

## Operating systems

For the list of supported operating systems, refer to the [IBM System Storage Interoperation Center \(SSIC\)](#)

**Note:** The LTO tape drives are supported when attached and run from the host operating system, however, in virtualization environments (for example, Hyper-V, KVM, Xen), the tape drives are not supported in the guest operating systems.

## **ISV backup software compatibility**

The Independent Software Vendors (ISVs) indicate support for the LTO Ultrium Tape Drives for the following ISV backup software:

- Acronis Backup Advanced
- Arcserve Backup
- ASG Time Navigator
- CommVault Simpana
- Dell/EMC NetWorker
- Echleaf Systems Virtual Drive
- Gemalto SafeNet
- HPE/Micro Focus Data Protector
- IBM High Performance Storage System
- IBM RMS
- IBM Security Key Lifecycle Manager
- IBM Spectrum Archive Drive Edition
- IBM Spectrum Archive Library Edition
- IBM Spectrum Archive Enterprise Edition
- IBM Spectrum Protect
- Microsoft System Center Data Protection Manager
- NetApp Data Storage
- Oracle DIVA
- Oracle OSB
- Oracle SAM-QFS-HSM
- Point Archival Gateway
- Quest NetVault
- Qstar
- Veritas Backup Exec
- Veritas NetBackup
- Veeam Backup and Retention
- Versity Storage Manager

For more information, see the [Independent Software Vendor matrix](#) for IBM LTO

## Lenovo Financial Services

Why wait to obtain the technology you need now? No payments for 90 days and predictable, low monthly payments make it easy to budget for your Lenovo solution.

- **Flexible**

Our in-depth knowledge of the products, services and various market segments allows us to offer greater flexibility in structures, documentation and end of lease options.

- **100% Solution Financing**

Financing your entire solution including hardware, software, and services, ensures more predictability in your project planning with fixed, manageable payments and low monthly payments.

- **Device as a Service (DaaS)**

Leverage latest technology to advance your business. Customized solutions aligned to your needs. Flexibility to add equipment to support growth. Protect your technology with Lenovo's Premier Support service.

- **24/7 Asset management**

Manage your financed solutions with electronic access to your lease documents, payment histories, invoices and asset information.

- **Fair Market Value (FMV) and \$1 Purchase Option Leases**

Maximize your purchasing power with our lowest cost option. An FMV lease offers lower monthly payments than loans or lease-to-own financing. Think of an FMV lease as a rental. You have the flexibility at the end of the lease term to return the equipment, continue leasing it, or purchase it for the fair market value. In a \$1 Out Purchase Option lease, you own the equipment. It is a good option when you are confident you will use the equipment for an extended period beyond the finance term. Both lease types have merits depending on your needs. We can help you determine which option will best meet your technological and budgetary goals.

Ask your Lenovo Financial Services representative about this promotion and how to submit a credit application. For the majority of credit applicants, we have enough information to deliver an instant decision and send a notification within minutes.

## Seller training courses

The following sales training courses are offered for employees and partners (login required). Courses are listed in date order.

### 1. Family Portfolio: Storage

2026-02-13 | 50 minutes | Employees and Partners

This course covers the Lenovo storage portfolio, from tape drives used for backups and archiving all the way through high-performance storage systems. After completing this course about the Storage family, the learner will be able to identify products and features within the family, describe the features of this Product Family, and recognize when a specific product should be selected.

Tags: Storage, ThinkSystem

Published: 2026-02-13

Length: 50 minutes

#### Start the training:

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Partner link: [Lenovo 360 Learning Center](#)

Course code: SXSW1201r18

### 2. Lenovo Data Center Product Portfolio

2025-06-11 | 20 minutes | Employees and Partners

This course introduces the Lenovo data center portfolio, and covers servers, storage, storage networking, and software-defined infrastructure products. After completing this course about Lenovo data center products, you will be able to identify product types within each data center family, describe Lenovo innovations that this product family or category uses, and recognize when a specific product should be selected.

Course objectives:

1. Identify product types within each data center family
2. Describe the features of the product family or category
3. Recognize when a specific product should be selected

Tags: Advanced DataCenter, DataCenter Products, Server, ThinkAgile, ThinkEdge, ThinkSystem

Published: 2025-06-11

Length: 20 minutes

#### Start the training:

Employee link: [Grow@Lenovo](mailto:Grow@Lenovo)

Partner link: [Lenovo 360 Learning Center](#)

Course code: SXXW1110r8

## Related publications and links

For more information, see the following resources:

- Storage Options for ThinkSystem Servers  
<https://lenovopress.com/lp0761-storage-options-for-thinksystem-servers>
- Lenovo Data Center Solution Configurator (DCSC)  
<http://dcsc.lenovo.com/>
- IBM System Storage Interoperation Center (SSIC)  
<http://ibm.com/systems/support/storage/ssic>
- IBM Redbooks publication, IBM Tape Library Guide for Open Systems  
<http://www.redbooks.ibm.com/abstracts/sg245946.html?Open>

## Related product families

Product families related to this document are the following:

- [Backup Units](#)
- [Tape Autoloaders and Libraries](#)

## Notices

Lenovo may not offer the products, services, or features discussed in this document in all countries. Consult your local Lenovo representative for information on the products and services currently available in your area. Any reference to a Lenovo product, program, or service is not intended to state or imply that only that Lenovo product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any Lenovo intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any other product, program, or service. Lenovo may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

Lenovo (United States), Inc.  
8001 Development Drive  
Morrisville, NC 27560  
U.S.A.  
Attention: Lenovo Director of Licensing

LENOVO PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. Lenovo may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

The products described in this document are not intended for use in implantation or other life support applications where malfunction may result in injury or death to persons. The information contained in this document does not affect or change Lenovo product specifications or warranties. Nothing in this document shall operate as an express or implied license or indemnity under the intellectual property rights of Lenovo or third parties. All information contained in this document was obtained in specific environments and is presented as an illustration. The result obtained in other operating environments may vary. Lenovo may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Any references in this publication to non-Lenovo Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this Lenovo product, and use of those Web sites is at your own risk. Any performance data contained herein was determined in a controlled environment. Therefore, the result obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

**© Copyright Lenovo 2026. All rights reserved.**

This document, TIPS1303, was created or updated on January 15, 2026.

Send us your comments in one of the following ways:

- Use the online Contact us review form found at:  
<https://lenovopress.lenovo.com/TIPS1303>
- Send your comments in an e-mail to:  
[comments@lenovopress.com](mailto:comments@lenovopress.com)

This document is available online at <https://lenovopress.lenovo.com/TIPS1303>.

## Trademarks

Lenovo and the Lenovo logo are trademarks or registered trademarks of Lenovo in the United States, other countries, or both. A current list of Lenovo trademarks is available on the Web at <https://www.lenovo.com/us/en/legal/copytrade/>.

The following terms are trademarks of Lenovo in the United States, other countries, or both:

Lenovo®

ThinkSystem®

The following terms are trademarks of other companies:

Linux® is the trademark of Linus Torvalds in the U.S. and other countries.

Microsoft, Hyper-V, Surface, Windows, and Windows Server are trademarks of Microsoft Corporation in the United States, other countries, or both.

IBM®, Guardium®, IBM Security®, IBM Spectrum®, ibm.com®, and Redbooks® are trademarks of IBM in the United States, other countries, or both.

Other company, product, or service names may be trademarks or service marks of others.