

# WORKGROUP LTO (8-SLOT) AUTOLOADER

AutoDR™



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GST's Workgroup LTO Autoloader is part of our AutoDR™ family. This Autoloader uses LTO-1, LTO-2, and LTO-3 tape technology and provides unattended backup capacity ranging up to 3.2TB native (6.4TB compressed). This compact autoloader spans the gap between GST's Single and Dual Tape Subsystems on one end and GST's tape libraries on the other end, adding considerable granularity to the GST tape product line. With the 8-cartridge configuration, total unattended backup capacity exceeds that of a single tape drive by 7 to 10 times. An LCD panel provides an advanced operator interface for visibility over backup operations.

## THE BIG PICTURE

- Eight LTO-1, LTO-2, or LTO-3 cartridges in an autoloader.
- Capacity: LTO-3 is 3.2TB native (6.4TB compressed).
- Speed: LTO-3 is 288GB/hour native (576GB compressed).
- Simplified unattended weekly backup.
- Logical extension of GST's single and dual LTO drives.
- Supports LTO-1, LTO-2, and LTO-3.
- Roadmap to LTO-4.
- LCD operator panel improves backup efficiency.
- LTO range: single drive to enterprise-wide libraries.
- Supports LVD, HVD, and FC connections.

The autoloader holds eight data cartridges, or seven data cartridges and a cleaning cartridge. The Workgroup LTO Autoloader can be used in a 7-day tape rotation procedure, allowing a full week, or even months, of unattended and automated data protection. An integrated mailslot (IO slot) allows for importing and exporting data cartridges without the need for a cartridge re-inventory.

The Workgroup LTO Autoloader can backup a wide variety of servers. They connect natively with LVD (low voltage differential), HVD (high voltage differential), and FC (Fibre Channel) interfaces.

## MODEL OVERVIEW

GST's Workgroup LTO Autoloader is configured in two server-to-SCSI Adapter interfaces and one fibre interface:

**Low Voltage Differential (LVD).** Maximum SCSI negotiation of 160MB/s; the total server-to-storage peripheral connectivity is 12 meters.

**High Voltage Differential (HVD).** Maximum SCSI negotiation of 40MB/s; the total server-to-storage peripheral connectivity is 25 meters.

**Fibre Channel (FC).** 2Gbit fibre interface.

## LTO TECHNOLOGY

LTO tape technologies supported are LTO-1, LTO-2, and the newer LTO-3. Native capacities for LTO-1, LTO-2, and LTO-3 are 100GB, 200GB, and 400GB (200GB, 400GB, 800GB compressed) with speeds of 54GB/hr, 86-126GB/hr, and 288GB/hr (108GB/hr, 172-252GB/hr, 576GB/hr compressed). It has a 4-generation roadmap that provides for a native capacity of 800GB per cartridge (1.6TB compressed) and a transfer rate of up to 576GB/hour (1.1TB/hour compressed).

Cartridges use linear (serpentine) tape format providing fewer moving parts, durability and reduced maintenance costs. The version of LTO technology that GST uses is best suited for high-capacity backup, restore and archiving. Enhancements in the areas of timing-based servos, hardware data compression, optimized track layouts and ECC error correction help improve capacities, performance and reliability.

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## KEY BENEFITS

**Simplified Weekly Backups** – 8 cartridge configuration provides unattended LTO backup capacities of up to 3.2TB native (6.4TB compressed), fully automating backups for an entire week, to the point each week when the magazine is removed for safe storage.

**Selective Restore** – Barcodes on the cartridges permit a restore process to take place using only the specified cartridges in the magazine.

**Media Investment Protection** – LTO-3 and LTO-2 is backward-read compatible to LTO-1, and forward-read compatible to future generations.

## KEY FEATURES

**LCD Front Panel Menu** – Multi-function LCD display provides comprehensive menu-driven command and control functions for setup, configuration, operations and diagnostics.

**Mailslot** – A separate Mailslot (IO slot) is used for importing and exporting individual tape cartridges under application control.

**Barcode Selective Restore** – Barcode reader permits cartridge scanning and supports random access for selective restore from specified cartridges.

**Convenient Drive Interface** – RS232 interface permits updating firmware and optimizing drive performance.

**Service and Support** – A variety of support programs provide installation and onsite service; includes GST's Accelerated Ship Program (GASP) to get replacement units on the scene rapidly.

**Warranty** – Purchase price includes a built-in manufacturer's warranty of three years.



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SPECIFICATIONS	LTO-1	LTO-2	LTO-3
<b>Capacity</b>			
Native	800 GB	1.6 TB	3.2 TB
Compressed <sup>1</sup>	1.6 TB	3.2 TB	6.4 TB
<b>Sustained Transfer Rate - MB/s</b>			
Native	15 MB/s	35 MB/s	80 MB/s
Compressed <sup>1</sup>	30 MB/s	70 MB/s	160 MB/s
<b>Sustained Transfer Rate - GB/hr</b>			
Native	54 GB/hr	126 GB/hr	288 GB/hr
Compressed <sup>1</sup>	108 GB/hr	252 GB/hr	576 GB/hr
<b>Drives and Media</b>			
Drive Type	LTO-1	LTO-2	LTO-3
Media	Ultrium 1	Ultrium 2	Ultrium 3
<b>Autoloader Configuration</b>			
Number of Drives	1	1	1
Number of Cartridges	8	8	8
<b>Autoloader Specifications</b>			
Average Exchange Time	10 seconds	10 seconds	10 seconds
MSBF	> 250,000 cartridge changes	> 250,000 cartridge changes	> 250,000 cartridge changes
MTBF	> 100,000 power-on hours	> 100,000 power-on hours	> 100,000 power-on hours
<b>Physical Specs, Autoloader Only</b>			
Dimensions (H x W x D), Desk	3.4" x 16.5" x 24.34"	3.4" x 16.5" x 24.34"	3.4" x 16.5" x 24.34"
Weight, Desk	25 lbs	25 lbs	25 lbs
Dimensions (H x W x D x U), Rack	3.4" x 16.5" x 24.34" x 2U	3.4" x 16.5" x 24.34" x 2U	3.4" x 16.5" x 24.34" x 2U
Weight (unpopulated), Rack	30 lbs	30 lbs	30 lbs
<b>Warranty</b>	3 Years	3 Years	3 Years

1. Compressed Capacity & Transfer Rate Assumes 2:1 Ratio.



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GST, Inc. engineers, manufactures, markets and sells a full line of innovative storage backup and restore products to meet today's need for high-performance, fail-safe reliability and cost-effective data storage. Products include single and dual tape subsystems, autoloaders, midrange tape libraries and modular enterprise-wide libraries. Complete information about the company, its products and support can be found at: [www.gstinc.com](http://www.gstinc.com)

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