



SCALAR 1000

Long-Term Protection for High-Growth Environments

LTO, DLT/SDLT, AIT DRIVE SUPPORT

1 TO 48 DRIVES

118 TO 1,182 CARTRIDGES

UP TO 307TB CAPACITY

INTEGRATED STORAGE NETWORKING ARCHITECTURE

The ADIC® Scalar® 1000 is a high-performance scalable tape library with integrated storage networking support that reduces Total Cost of Ownership in high-growth environments. With its unique barrier-free expansion, the Scalar 1000 grows easily with your data while maintaining superior performance and reliability—and eliminating use of pass-through ports. To make it easy for IT departments to add SAN or NAS backup, it integrates serverless backup, self-reporting connectivity checks, a built-in SAN firewall, and data path conditioning to increase backup performance and reliability. The Scalar 1000 supports LTO, DLT/SDLT, and AIT technology in single or mixed-media configurations, and it offers up to 16 “virtual library” partitions.



The Scalar 1000 expands with data and integrates advanced SAN support.

FEATURES AND BENEFITS

- ▶ Seamless growth path—scalable design allows cost-effective expansion without using pass-through ports
- ▶ Qualified storage network interoperability means seamless integration into new or existing SANs
- ▶ Integrated storage network support improves SAN backup performance and reliability
- ▶ Intelligent management tools include backup error recovery, drive performance optimization, and SNMP event reporting
- ▶ Browser-based management lets users perform all library operations and diagnostics remotely
- ▶ Proven in Fortune 1000 companies for scalability and reliability
- ▶ Supports LTO, DLT/SDLT and AIT in single or multi-drive installations for maximum flexibility and performance
- ▶ Provides up to 16 “virtual library” partition options for multiple applications support
- ▶ One-year on-site service included for highest levels of protection



IDC 2001 revenue and unit market share data for all automated systems using DLT, SDLT, LTO, 8mm or AIT drives.

SCALAR 1000 BUILDING BLOCKS







Scalar 1000 Features a Single Robotic Mechanism For The Entire Library

For maximum performance and reliability at the lowest cost, the Scalar 1000 features barrier-free scalability. When new modules are added, the x-axis robotics are extended through all units for continuous high speed service without pass-through ports.

The Scalar 1000 control module, which can also serve as a self-contained library, is configured with space for 6 or 12 drives, depending on configuration and drive type. Expansion modules can be configured for media storage only (no drives), or with room for 6 or 12 drives. When fewer drive bays are required, the modules are designed to provide room for more media.

Adding modules, drives, drive bays, and cartridge positions are simple field upgrades for maximum flexibility and investment protection. After upgrades, the library self-discovers changes and automatically reconfigures system settings.

LIBRARY CONFIGURATIONS

		LTO/DLT/SDLT						AIT				
		Drives		Cartridges		Capacity (TB) ¹		Drives	Cartridges	Capacity (TB) ¹		
		LTO/DLT/SDLT	LTO	DLT/SDLT	LTO	DLT	SDLT220	SDLT320	AIT	AIT	AIT-2	AIT-3
Control Module		1-6	188	158	37.6	12.6	34.8	50.6	2-12	237	30.8	61.6
		7-12	140	118	28.0	9.4	26.0	37.8				
with 1 Expansion Module		1-6	438	368	87.6	29.4	81.0	117.8	2-12	552	71.8	143.5
		7-12	390	328	78.0	26.2	72.2	105.0	14-24	492	64.0	127.9
		13-18	342	288	68.4	23.0	63.4	92.2				
		19-24	294	248	58.8	19.8	54.6	79.4				
with 2 Expansion Modules		1-6	688	578	137.6	46.2	127.2	185.0	2-12	867	112.7	225.4
		7-12	640	538	128.0	43.0	118.4	172.2	14-24	807	104.9	209.8
		13-18	592	498	118.4	39.8	109.6	159.4	24-36	747	97.1	194.2
		19-24	544	458	108.8	36.6	100.8	146.6				
		25-30	496	418	99.2	33.4	92.0	133.8				
with 3 Expansion Modules		31-36	448	378	89.6	30.2	83.2	121.0				
		1-6	938	788	187.6	63.0	173.4	252.2	2-12	1,182	153.7	307.3
		7-12	890	748	178.0	59.8	164.6	239.4	14-24	1,122	145.9	291.7
		13-18	842	708	168.4	56.6	155.8	226.6	24-36	1,062	138.1	276.1
		19-24	794	668	158.8	53.4	147.0	213.8	38-48	1,002	130.3	260.5
		25-30	746	628	149.2	50.2	138.2	201.0				
		31-36	698	588	139.6	47.0	129.4	188.2				
		37-42	650	548	130.0	43.8	120.6	175.4				
43-48	602	508	120.4	40.6	111.8	162.6						

SYSTEM COMPONENTS

Scalar 1000 Control Module

Drive Technology	Drives	Cartridges
LTO	6	Up to 188
	12	Up to 140
SDLT/DLT	6	Up to 158
	12	Up to 118
AIT	12	Up to 237

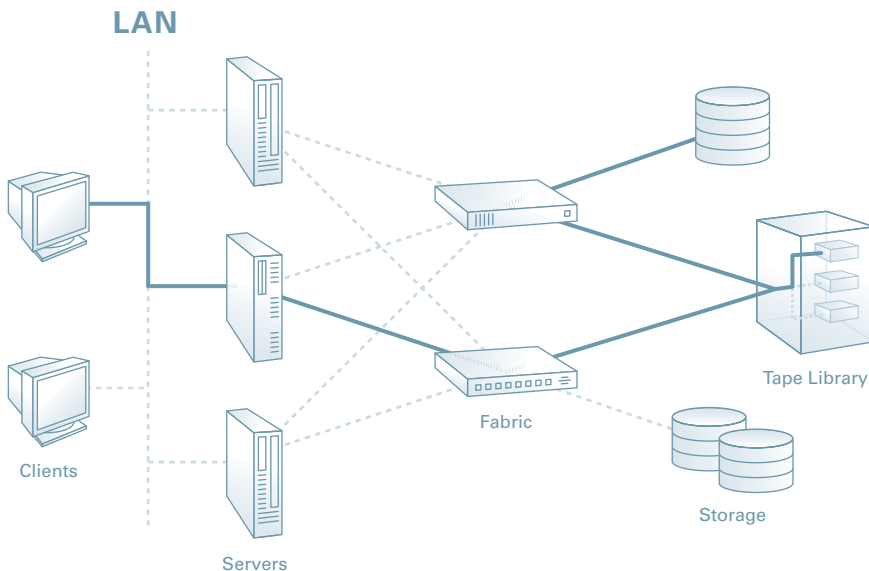
Scalar 1000 Expansion Module

Drive Technology	Drives	Cartridges
LTO	0	Up to 250
	6	Up to 202
	12	Up to 154
SDLT/DLT	0	Up to 210
	6	Up to 170
	12	Up to 130
AIT	0	Up to 315
	12	Up to 255

¹Assumes 2:1 average compression for SDLT/DLT and LTO; 2.6:1 average compression for AIT

EXCLUSIVE INTEGRATION OF STORAGE NETWORKING SUPPORT

The Scalar 1000 is the only library in its class to integrate storage networking support directly into its architecture for better performance, higher reliability, and easier management. Its direct SAN connection makes it easy to set up and operate. Its data path conditioning builds in error recovery, proactively verifies that paths are ready to carry data, and even makes drives perform better. And the Scalar 1000's integrated SAN firewall protects your data from unauthorized access. The Scalar storage networking architecture can extend to include Gigabit Ethernet protocols like iSCSI, and the technology is certified for compatibility with leading SAN disk and NAS appliance providers.



The Scalar 1000's integrated storage networking support improves backup reliability through end-to-end path verification.

PERFORMANCE, RELIABILITY, AVAILABILITY

The Scalar 1000 supports up to 48 drives for the highest sustained performance in its class, and lets users select LTO, DLT, SDLT, or AIT technology in mixed or single-technology configurations to provide high capacity, high transfer rates, and rapid time to data. With a 1,000,000-cartridge exchange rating, the Scalar 1000 is designed to provide years of trouble-free service, even in high duty cycle environments.

The Scalar 1000 provides up to 18-cartridge bulk loading, fast 60-second inventory, 30-minute mean time to repair, and self-configuration. The Scalar 1000's remote management unit (RMU) allows all of the library operations to be performed via a web browser from any location. Its Scalar DLC option provides pager and email alerts (including "phone home" self-generating service requests), and it allows the library to be configured as up to 16 separate "virtual libraries."

Qualified Compatibility

The Scalar storage networking architecture is qualified with all leading SAN and NAS providers.

- IBM
- Veritas
- EMC
- Brocade
- Legato
- Hewlett-Packard
- Network Appliance
- HDS
- Dell

Please see adic.com for additional details.

LIBRARY CONFIGURATIONS

	LTO			DLT/SDLT					AIT			
	Drives	Cartridges	Capacity (TB) ¹	Drives	Cartridges	Capacity (TB) ¹			Drives	Cartridges	Capacity (TB) ¹	
						DLT	SDLT220	SDLT320			AIT-2	AIT-3
Base Configuration	1 to 12	Up to 188	37.6	1 to 12	Up to 158	12.6	34.8	50.6	2 to 12	Up to 237	30.8	61.6
w/ 1 Exp. Mod.	1 to 24	Up to 438	87.6	1 to 24	Up to 368	29.4	81.0	117.8	2 to 24	Up to 552	71.8	143.5
w/ 2 Exp. Mod.	1 to 36	Up to 688	137.6	1 to 36	Up to 578	46.2	127.2	185.0	2 to 36	Up to 867	112.7	225.4
w/ 3 Exp. Mod.	1 to 48	Up to 938	187.6	1 to 48	Up to 788	63.0	173.4	252.2	2 to 48	Up to 1,182	153.7	307.3

DRIVES AND PERFORMANCE¹

Drive Type:	LTO	DLT8000	SDLT220	SDLT320	AIT-2	AIT-3
Cartridge Capacity						
Native (GB):	100	40	110	160	50	100
Compressed (GB):	200	80	220	320	130	260
Transfer Rate						
Native (MB/sec):	15	6	11	16	6	12
Compressed (MB/sec):	30	12	22	32	15.6	31.2
Data Buffer (MB):	32	8	32	64	10	18
Media:	LTO: LTO Ultrium 100GB Data Cartridge (metal particle); DLT: DLTtape IV; SDLT: Super DLTtape 1; AIT-2: SDX2-50C; AIT-3: SDX3-100C					
Backward Compatibility:	DLT: reads DLT 4000, 7000; SDLT220: reads DLT 4000, 7000, 8000 and DLT1; SDLT320: reads and writes SDLT220, reads DLT 4000, 7000, 8000, DLT1 and V580; AIT-3: reads AIT-2					

RELIABILITY

Drive Hard Error Rate:	Up to 1 in 10 ¹⁷ bits read
Tape Shelf Life:	30 years minimum (at 20°C, 40% RH)
Drive MTBF:	Greater than 200,000 power-on hours
Library MCBF:	Greater than 1,000,000
Power:	Optional secondary power supply
Diagnostics:	SNMP traps reported through RMU or Scalar DLC. Built-in self-test, store/recall past events, fault isolation assistance, self-initiating configuration and calibration; email alert; SAN device health checks
MTTR:	30 minutes
Module Upgrade:	Any storage module may be added in two hours; customer-installable drive upgrades

PHYSICAL

Dimensions (per module):	29.5"W x 47"D x 72"H (74.9cm x 119.4cm x 182.9cm)
Max. Weight:	1052 lbs (477kg) (Control Module) 817 lbs (372kg) (Expansion Module)

OPERATION

Cartridge Exchanges:	350 peak swaps per hour
Drive Interface:	LTO: SCSI-2 LVD; AIT, SDLT, DLT: SCSI-2 LVD or HVD; integrated FC interface optional for all
Library Interface:	SCSI-2 HVD; integrated FC interface optional
SCSI Connection:	68-pin micro-D
Configuration:	Auto-discovery and auto-calibration for installed/added components (modules, tapes, drives, etc.)
Import/Export:	Up to 12 (LTO/SDLT) or 18 (AIT) cartridge positions

ENVIRONMENTAL

Electrical:	115-230 VAC, 1.6 kVA
Temperature:	16 to 32°C operating
Humidity:	15 to 75% non-condensing operating

COMPLIANCE AND CERTIFICATION

Safety:	UL-1950 ITE, CSA950, EN 60950
Emissions:	FCC #47 CFR, Part 15, Class A; CSA C108.8M; EN 55022, Class A; EN 6100-3-2, 3 (LTO) IEC (1000-4-2, 3, and 4) (DLT and AIT); EN 61000-4-2, 3, 4, 5, 6, 8, and 11 (LTO)
Immunity:	CE
International:	CE

STORAGE NETWORKING SUPPORT

Platform/Connectivity:	SNC 5100 (2GB Fibre Channel) or SNC 3000 (1GB Fibre Channel)
Management Services:	End-to-end path verification, error recovery, drive performance optimization, SAN security (Scalar Firewall Manager), serverless backup (Data Mover Module)

SOFTWARE AND PLATFORMS

Consult the most recent ADIC Software Compatibility Guide for a complete list of software and platforms compatible with the Scalar 1000.

¹ Assumes 2:1 average compression for SDLT/DLT and LTO; 2.6:1 average compression for AIT

ABOUT ADIC

Advanced Digital Information Corporation (ADIC) is a leading provider of Intelligent Storage™ solutions to the open systems marketplace. ADIC is the world's largest supplier of automated tape systems using the drive technologies most often employed for backing up open system, client-server networks.* The company's data management software and storage networking appliances provide IT managers innovative tools for storing, managing, and protecting their valuable digital assets. ADIC storage products are available through a worldwide sales force and a global network of resellers and OEMs, including Dell, Fujitsu-Siemens, HP and IBM.

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Intelligent Storage is Self-Managing

Only ADIC's storage networking libraries feature data path conditioning, a technology that proactively protects the integrity of paths carrying data to the library.



*IDC 2001 revenue and unit market share data for all automated systems using DLT, SDLT, LTO, 8mm or AIT drives.