



Scalar i500 8.4 Addendum

Release	Scalar i500 8.4 (670G.GS00x)
Date	September 2015

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Drive Specifications

The Scalar i500 library now supports the following components. LTO-7 drives support the same functionality and features as LTO-6 drives, and are installed in the same way.

Supported Cartridges

- LTO-1 (read/write in LTO-2 drives; read-only in LTO-3 drives)
- LTO-2 (read/write in LTO-2 and LTO-3 drives; read-only in LTO-4 drives)
- LTO-3 (read/write in LTO-3 and LTO-4 drives; read-only in LTO-5 drives; supports write-once, read-many (WORM) functionality)
- LTO-4 (read/write in LTO-4 and LTO-5; read-only in LTO-6 drives; supports WORM functionality)
- LTO-5 (read/write in LTO-5 and LTO-6 drives; read-only in LTO-7 drives; supports WORM functionality)
- LTO-6 (read/write in LTO-6 and in LTO-7 drives; supports WORM functionality)
- LTO-7 (read/write in LTO-7 drives; supports WORM functionality)

Supported Tape Drive Types

- IBM LTO-2 (SCSI and Fibre Channel) Tape Drive
- IBM LTO-3 (SCSI and Fibre Channel) Tape Drive
- HP LTO-4 (Fibre Channel and SAS) Tape Drive
- IBM LTO-4 (SCSI, Fibre Channel and SAS) Tape Drive
- HP LTO-5 Single Port SAS Tape Drive
- HP LTO-5 Dual Port Fibre Channel Tape Drive
- IBM LTO-5 Dual Port SAS Tape Drive
- IBM LTO-5 Single Port Fibre Channel Tape Drive
- IBM LTO-5 Dual Port Fibre Channel Tape Drive
- HP LTO-6 Single Port SAS Tape Drive
- HP LTO-6 Dual Port Fibre Channel Tape Drive
- IBM LTO-6 Single Port SAS Tape Drive
- IBM LTO-6 Single Port Fibre Channel Tape Drive
- IBM LTO-6 Dual Port Fibre Channel Tape Drive
- IBM LTO-7 Dual Port Fibre Channel Tape Drive

Subassembly Power Consumption

- LTO-7 Drive Sled Module (Fibre Channel) Typical Power Consumption: 0.035 kW/Hr
 - LTO-7 Drive Sled Module (Fibre Channel) Typical Heat Output: 119.4 BTU/Hr
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Control Path Failover and Data Path Failover

New functionality has been added to the i500 Control Path Failover and Data Path Failover features, as described here. For detailed information regarding basic data path and control path failover configurations, see

- Online Help available on the **Setup > Control Path** screen
- Online Help available on the **Setup > Drive Settings** screen
- "Configuring FC Host Port Failover" in the *i500 User Guide*
- "Configuring Control Path Failover" in the *i500 User Guide*
- "Configuring Data Path" Failover in the *i500 User Guide*

By default, logical library partitions and tape drives enable a single control path and data path, respectively. This default partition control path and default drive data path configuration is the Standard path configuration. Redundant/failover configurations exist for both, control path and data path configurations and require a Path Failover/Native Storage Networking (SNW) (formerly known as Storage Networking or SNW) license.

Before you can use a drive for any of the storage networking features, you must have a sufficient drive count associated with the installed Path Failover/Native Storage Networking license. Any drive you use for an SNW feature consumes one license count. A drive consumes only one license count even if you use it for multiple SNW features. Features available to be configured for SNW include:

- **Basic** Control Path and Data Path Failover configurations with HP LTO-5 and LTO-6 drives
- **Multi** Control Path and Data Path Failover configurations with IBM and/or HP LTO-5 and higher drives
- **Advanced** Control Path and Data Path Failover configurations with IBM LTO-5 and higher drives

Note: The **Standard** Control Path/Data Path option provides a single connection path and provides no failover protection.

Setup - Drive Settings
Modify the settings on Fibre Channel drives.

Fibre Channel Drives Total Number of Drives: 5

Type	Location	Data Path	Loop ID	Requested Topology	Requested Speed	Actual Topology	Actual Speed	WWNN	FC I/O Blade Connected	Partition
HP_LTO-6	-1,4	Standard	75	Auto (NL)	Auto	Unknown	Unknown	500308C0:97E8E09C	No	Physical Library
HP_LTO-6	0,1	Standard	61	Auto (NL)	Auto	Loop (L)	4 Gb/s	500308C0:97E8E000	No	Physical Library
HP_LTO-5	-1,3	Standard	73	Auto (NL)	Auto	Unknown	Unknown	500308C0:97E8E098	No	Physical Library
IBM_LTO-7	-1,2	Standard	71	Auto (NL)	Auto	Loop (L)	8 Gb/s	500308C0:97E8E094	No	library_a
IBM_LTO-5	-1,1	Standard	69	Auto (NL)	Auto	Loop (L)	8 Gb/s	500308C0:97E8E090	No	library_a

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Control Path - library_a (Online)
Select Control Path Type
Standard

Drive Type	Interface Type	Location	Control Path	Failover	Is Active	FC I/O Blade Connected	Total Drives: 2
IBM_LTO-7	Dual Fibre	-1,2	<input type="radio"/>	N/A	N/A	No	
IBM_LTO-5	Single Fibre	-1,1	<input type="radio"/>	N/A	N/A	No	

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Back Cancel Apply

Basic Path Failover (BPF)

Basic control path and data path failover configurations provide a single path of failover, and are supported by a fibre switch on the same fabric that supports NPIV (N_Port ID virtualization) connected to HP LTO-5 and LTO-6 drives.

Multi-Path Failover (MPF)

This configuration option requires a Storage Networking license and allows you to configure dual-port IBM and/or HP LTO-5 and higher drives for multi-data path operation when both ports are enabled for host access. You can also configure these drives for multi-control path operation, which provides redundant paths to the partition. To configure drives for Multi-Data Path and/or Multi-Control Path access, host application support is required in support of redundant path access (see the Release Notes for more information).

Multi-Control Path

Multi-Control Path configurations are supported for single as well as dual-ported IBM and/or HP LTO 5 and higher FC drives. In addition to the Fibre Channel drives, you need the following:

- A Storage Networking license must be installed on the library and the associated drive count must be sufficient to cover all drives involved in the multi-path configuration.
- The tape drives must NOT be connected to an FC I/O blade.

Multi-Data Path

Multi-Data Path configurations are supported for dual ported IBM and/or HP LTO-5 and higher Fibre Channel (FC) drives. In addition to the dual port FC drives, you need the following:

- A Storage Networking license must be installed on the library and the associated drive count must be sufficient to cover all drives involved in the multi-path configuration.

- The tape drives must NOT be connected to an FC I/O blade.

Advanced Path Failover (APF)

This configuration provides support for Storage Networking-licensed IBM LTO-5 FC and higher drives. APF supports control path as well as data path failover support. This configuration requires hosts to have the Advanced Path Failover Driver for IBM Drives installed. This driver will determine and handle control path and data path selections in the event of connection path failures. If both control path and data path failover are configured, the control path will not fail over to another tape drive unless both ports on the control path tape drive have failed.

Unlike the multi-path configuration which reports redundant connection paths to the application, requiring the application to route and handle multiple connection paths to the same device, the advanced path failover solution shields applications from handling multiple connection paths to a drive and/or library partition. The Advanced Path Failover Driver for IBM drives will report just one device connection and handle all redundant path and path selections in the event of communication path failures and path failover recovery operation.

Advanced Control Path Failover (ACPF)

Advanced Control Path Failover configurations are supported for single as well as dual-ported IBM LTO-5 and higher FC drives. In conjunction with an installed Advanced Path Failover Driver for IBM Drives, the driver will use one of the supported drive connections to communicate library partition requests, and in case of a connection failure, use a redundant drive connection path to continue library operation.

To configure a partition for advanced control path failover, you need the following:

- A Storage Networking license must be installed on the library and the associated drive count must be sufficient to cover all drives involved in the advanced control path configuration.
- Neither drive hosting the partition control path may be connected to a FC I/O blade.
- An APFO driver must be installed on the host(s).

Advanced Data Path Failover (ADPF)

Advanced Data Path Failover configurations are supported for dual-ported IBM LTO-5 and higher FC drives. In conjunction with an installed Advanced Path Failover Driver for IBM Drives, the driver will use one of the supported drive connections to communicate drive requests, and in the event of a connection failure, use the redundant connection path to continue drive operation.

To configure a tape drive for advanced data path failover, you need the following:

- A Storage Networking license must be installed on the library and the associated drive count must be sufficient to cover all drives involved in the advanced data path configuration.
- Neither FC port on the drive may be connected to a FC I/O blade.
- An APFO driver must be installed on the host(s).

Contacting Quantum

More information about this product is available on the Service and Support website at <http://www.quantum.com/ServiceandSupport/Index.aspx>. The Service and Support Website contains a collection of information, including answers to frequently asked questions (FAQs). You can also access software, firmware, and drivers through this site.

For further assistance, or if training is desired, contact the Quantum Customer Support Center:

Region	Support Contact
North America	1-800-284-5101 (toll free) +1-720-249-5700
EMEA	+800-7826-8888 (toll free) +49 6131 324 185
Asia Pacific	+800-7826-8887 (toll free) +603-7953-3010

For worldwide support:

<http://www.quantum.com/serviceandsupport/index.aspx>
