



IBM System Storage SAN768B and SAN384B offer a fabric-based encryption blade for data-at-rest

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At a glance

To meet the demands of compliance with regulatory mandates, industry standards of data confidentiality, and valuable digital assets protection, the Encryption Blade is designed to deliver:

- Sixteen port auto-sensing 8 Gbps Fibre Channel (FC) blade with cryptography (encryption/decryption) and data compression capabilities
- Support for Tivoli® Key Lifecycle Manager support for both disk and tape encryption applications
- Network-based solution that secures data-at-rest for disk array LUNs, heterogeneous tape drives, and virtual tape libraries

To help organizations protect their technology investments, the Encryption Blade installed into SAN768B and SAN384B systems features seamless integration and forward and backward compatibility with IBM® b-type and m-type fabrics.

Overview

IBM System Storage® SAN768B and SAN384B systems can be ordered with Fibre Channel Encryption Blades (feature number 3895). Encryption Blades include sixteen 8 Gbps ports and are designed to support data compression and encryption, with up to 96 Gbps of capable encryption processing and up to 48 Gbps of compression processing.

Key advantages of the Encryption Blade solution include:

- Ability to encrypt data at wire speed
- Central management of storage and fabric-based security resources
- Multi-vendor storage system and fabric support
- Transparent, online encryption of cleartext LUNs and rekeying of encrypted LUNs without disruption
- Data compression and integrity authentication for tape backup
- Simplified, non-disruptive installation and configuration
- Plug-in storage security services for existing SAN fabrics

SAN768B and SAN384B systems installed with Encryption Blades are designed for use in the following SAN environments:

- New data center deployments with large-scale encryption

- Heterogeneous disk and tape storage environments without device-based encryption capability
- Standalone data center backbones with encryption and compression in b-type and m-type single and dual SAN fabrics
- Secure fabric-based environments that integrate with Tivoli Key Lifecycle Manager management system
- Expanding encryption environments that require protection for current data security and key management investments

The Encryption Blade is ideal for applications requiring:

- Highly sensitive IT applications with secure data-at-rest requirements
- Secure data backups for offsite disk and tape storage and long-term archiving
- Support for heterogeneous disk and tape storage environments from a centralized point of management
- Decommissioning of disk arrays that require legal validation of the logical destruction and data shredding of devices (the Encryption Blade helps secure decommissioning of disk-based storage devices by encrypting an entire LUN and destroying the data encryption key)
- Secure replication of virtual tape library (VTL) backups to remote facilities

Key prerequisites

The IBM System Storage SAN Switch family supports FC connectivity for servers and storage. SAN768B and SAN384B systems with Encryption Blades require:

- Fabric Operating System v6.4.1, or later
- Tivoli Key Lifecycle Manager v2.0, or later

For specific support dates, configuration options, server models, operating systems levels, and attachment capabilities, visit

<http://www.ibm.com/systems/storage/san/b-type>

Planned availability date

November 19, 2010

Availability of programs with an encryption algorithm in France is subject to French government approval.

Description

Most sensitive corporate data is stored in the data center, and the vast majority of data from critical applications resides in a SAN, enabling organizations to leverage the existing intelligence layer in the storage fabric. This layer provides a centralized framework in which to deploy, manage, and scale fabric-based data security solutions.

The Encryption Blade feature of the IBM System Storage SAN768B and SAN384B is designed to offer encryption and compression in heterogeneous enterprise data centers. The Encryption Blade scales non-disruptively, providing from 48 up to 96 Gbps of encryption processing power to meet the needs of the most demanding environments with flexible, on-demand performance. It also provides compression services at speeds up to 48 Gbps for tape storage systems.

Based on industry standards, IBM b-type encryption for data-at-rest provides centralized, scalable encryption and compression services that can easily integrate

into existing Brocade Fabric Operative System (FOS) and Brocade M-Enterprise Operative System (M-EOS) environments.

The b-type fabric-based approach to data encryption scales to meet performance requirements provides a centralized point of management for storage security and key management, and supports heterogeneous storage environments. Deployment is simple and non-disruptive; organizations can encrypt data from any switch port without reconfiguring the fabric.

In addition, organizations can implement provisioning without shutting down applications or changing the LUN mapping and LUN masking configurations on the target storage arrays. The Encryption Blade is managed and configured using the IBM System Storage Data Center Fabric Manager (DCFM) and command line interface (CLI) management tools, and is easily integrated into existing network infrastructures.

Optional features

New optional features are available to extend the functionality of IBM System Storage SAN768B (2499-384) and IBM System Storage SAN768B (2499-192) directors:

Encryption Blade (feature number 3895): A 16-port, auto-sensing 8 Gbps FC blade designed to provide data encryption and compression. The Encryption Blade scales non-disruptively, providing from 48 up to 96 Gbps of encryption processing power to meet the needs of the most demanding environments with flexible, on-demand performance. It also provides compression services at speeds up to 48 Gbps for tape storage systems.

Encryption 96 Gbps Disk Performance Upgrade Activation (feature number 7895): Disk Encryption Performance Upgrade license enables scalability of performance on Encryption Blade features. The upgrade is designed to provide increased throughput for disk encryption applications up to 96 Gbps, effectively doubling encrypted throughput performance for disk-based storage with no disruption to operations.

Accessibility by people with disabilities

A U.S. Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

http://www.ibm.com/able/product_accessibility/index.html

Product number

Description	Machine type	Model	Feature number
New features for IBM System Storage SAN768B			
Encryption Blade	2499	384	3895
Encryption 96 Gbps disk performance upgr activation	2499	384	7895
IBM System Storage SAN384B			
Encryption Blade	2499	192	3895
Encryption 96 Gbps disk performance upgr activation	2499	192	7895

Publications

Publications are shipped with the product and have been revised to reflect this announcement. Additional copies of individual publications are available on the Internet at

<http://www.ibm.com/systems/storage/san/b-type>

Publications are shipped with the product and have been revised to reflect this announcement. To directly download translated publications in PDF format, visit the IBM Publications Center at

<http://www.ibm.com/shop/publications/order>

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<http://www.ibm.com/services/learning/index.html>

Select your country, and then select the product as the category.

Technical information

Specified operating environment

Physical specifications

2499-384

width:	43.74 cm (17.22 in)
Height:	61.24 cm (24.11 in)
Depth:	61.19 cm (24.09 in), without door
Depth:	73.20 cm (28.82 in), with door
weight:	103.50 kg (228.20 lb.), 384 port fully populated

2499-192

width:	43.74 cm (17.22 in)
Height:	35.00 cm (13.78 in, 8U) plus 4.37 cm (1.72 in, 1U) exhaust shelf
Depth:	61.19 cm (24.09 in), without door
Depth:	73.20 cm (28.82 in), with door

weight: 25.76 kg (56.8 lb.), empty chassis
weight: 68.00 kg (150.00 lb.), fully populated

For information on technical specifications of IBM SAN b-type products, including operating environment, physical specifications, and recommended installation procedures, refer to

<http://www.ibm.com/systems/storage/san/b-type>

Hardware requirements

Supported servers and storage systems

The IBM System Storage SAN384B and SAN768B directors installed with Encryption Blades are designed to support FC connectivity for the following.

Servers

- IBM Power Systems™
- IBM System p® servers
- IBM System x® servers
- Other Intel-based servers with Linux®, and Microsoft® Windows® 2003
- Selected Sun and HP servers

Storage software

- Tivoli Key Lifecycle Manager v2.0, or later

Storage systems

- IBM System Storage DS8000™
- IBM XIV® Storage System
- IBM TotalStorage® Enterprise Storage Server®
- IBM TotalStorage 3580, 3588, and 3592 Tape Drives
- IBM TotalStorage 3590 Tape Drives
- IBM TotalStorage 3494, 3582, and 3583 Tape Libraries
- IBM System Storage 3584 Tape Libraries
- IBM TotalStorage 3581 Tape Autoloader
- IBM System Storage 3584 High Availability Frame Model HA1
- Other selected storage systems

For specific support dates, configuration options, server models, operating systems levels, attachment capabilities, and throughput connectivity speeds, visit

<http://www.ibm.com/systems/storage/san/b-type>

Software requirements

Specific details on supported operating system releases are available at

<http://www.ibm.com/systems/storage/san/b-type>

Planning information

Customer responsibilities

Planning information, including customer responsibilities, physical planning, and installability is available in the specific product planning manuals at

<http://www.ibm.com/systems/storage/san/b-type>

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Cable orders

Fiber optic cable: A fiber optic cable is required for attaching the IBM System Storage SAN384B and SAN768B to the host system adapters or other storage area FC components. The cable can be customer supplied or ordered with the directors in the lengths available. The attaching fiber cable must be 50.0/125 micrometers for distances up to 300 meters at 2 Gbps speed, 150 meters at 4 Gbps, or 50 meters at 8 Gbps. The attaching fiber cable must be 62.5/125 micrometers for distances up to 175 meters at 2 Gbps speed, or 70 meters at 4 Gbps, or 21 meters at 8 Gbps. Longwave SFPs require 9-Micron singlemode fiber optic cables. The connection is an LC connector type.

In many situations, the required lengths and installation of fiber optic cables will be unique to each customer's configuration and facility specifications. IBM Network Integration and Deployment Services, offered by IBM Global Services, can provide assistance for these unique cabling and installation requirements.

Security, auditability, and control

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communications facilities.

Global Technology Services

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings, for the efficient installation, implementation, and/or integration of this product.

Terms and conditions

Field installable feature

Yes

Warranty period

One year

An IBM part or feature installed during the initial installation of an IBM machine is subject to a full warranty effective on the date of installation of the machine. An IBM part or feature which replaces a previously installed part or feature assumes the remainder of the warranty period for the replaced part or feature. An IBM part or feature added to a machine without replacing a previously installed part or feature is subject to a full warranty effective on its date of installation. Unless specified otherwise, the warranty period, type of warranty service, and service level of a part or feature is the same as the machine it is installed.

Customer setup

No

Machine code

No license terms apply

Pricing

For all local charges, contact your IBM representative.

Announcement countries

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