

BROCADE SILKWORM® 3900 FABRIC SWITCH FROM STORAGE TEK

STORAGETEK'S
OFFERINGS



KEY BUSINESS BENEFITS

> Seamless integration

Auto-sensing Fibre Channel ports with one- or two-gigabit-per-second interfaces allow this switch to integrate seamlessly with existing fabrics. You get all the advantages, none of the typical roadblocks.

> Enterprise-class performance

Up to 128 gigabits per second of aggregated throughput, ISL Trunking with up to eight gigabits per second of throughput per logical ISL trunk. Extended Fabric features for remote operations provide built-in horsepower for demanding SAN environments.

> Mission-critical availability

Third-generation intelligent architecture enables network resiliency, automatic data path rerouting, non-disruptive code load and redundant hot-pluggable components. Data is available when and where it's needed across the enterprise.

> Open SAN management

Intelligent fabric services architecture and a proven operating system deliver performance, security and manageability along with high-end capabilities such as advanced hardware-enforced zoning, advanced fabric services, and performance monitoring.

> Bottom-line storage

The SilkWorm 3900 switch cuts costs and unleashes trapped profits by supporting a SAN infrastructure that's built for productivity. You optimize your use of IT assets, reduce capital expenditures and save money.

Midsized to large storage networks have complex and critical storage challenges. Reducing management complexity, increasing flexibility and keeping costs down are key drivers in today's IT environments. That's where the Brocade SilkWorm® 3900 fabric switch comes in. Now you can manage your enterprise SAN with a 32-port, auto-sensing Fibre Channel switching solution that is designed specifically for rapidly evolving IT environments. The SilkWorm 3900 switch combines the performance capabilities of an enterprise switch with the cost-effectiveness of a modular switch solution. It's the perfect combination of affordability, flexibility and scalability — ideal as part of a departmental SAN fabric, a small core or a core-to-edge SAN built around the Brocade SilkWorm® 12000 director from StorageTek.

PROVEN TECHNOLOGY, SECURE STORAGE

The SilkWorm family features intelligent third-generation technology that provides an available, secure foundation for SAN applications such as high-speed backup, server and storage consolidation, remote mirroring, and long-distance data replication. You get a SAN fabric capable of greater than 99.999 percent overall system availability. The 3900 switch, combined with other storage products and services from StorageTek®, forms the foundation of a cost-effective, end-to-end storage solution for enterprises that need reliable access to data.

CONTINUOUS AVAILABILITY, MINUTE AFTER MINUTE, DAY AFTER DAY

A core-to-edge SAN model based on the SilkWorm 3900 switch has the advantage of redundant fabrics, hot-pluggable components and multiple data paths to provide high availability across the fabric. Brocade's included FSPF (Fabric Shortest Path First) technology allows the fabric to automatically isolate problems and reroute traffic, sidestepping failed links and keeping data flowing using alternate paths, all while keeping hop counts down. You get a SAN infrastructure that helps to provide business continuity and data access — a must for any 24x7 enterprise.

BUILT FOR SPEED, MADE TO PERFORM

The SilkWorm 3900 switch provides visible advantages to companies that want to increase application performance and day-to-day productivity. It can deliver up to 128 gigabits per second of aggregated throughput, with 32 ports capable of two-gigabit-per-second full-duplex performance. ISL Trunking further boosts performance by combining up to four ISLs into a single logical ISL with up to eight-gigabit-per-second throughput per trunk. Fibre Channel speed is also possible at longer distances for remote operation. By leveraging the SilkWorm 3900 switch's Extended Fabrics feature and Dense Wave Division Multiplexing (DWDM) technology, you can empower your storage network to span up to 100 km over Metropolitan Area Networks (MANs) at high speed, significantly enhancing disaster recovery operations.

INTELLIGENT ARCHITECTURE, PROVEN TECHNOLOGY

The SilkWorm 3900 switch combines intelligent fabric services architecture, third-generation ASIC technology and a proven operating system for industry-leading security, manageability and performance. You have access to advanced capabilities such as frame filtering and fabric services to unlock the intelligence of the SAN fabric for a variety of applications. For example, hardware-enforced zoning based on World Wide Name (WWN) allows secure and robust access to the SAN, while advanced performance monitoring provides fabric-wide performance analysis to support load balancing, application charge-back and more.

SIMPLE, OPEN SAN MANAGEMENT

SAN management just got simpler. The SilkWorm 3900 switch networks core and edge switches under a common management platform built around the SilkWorm 3900 switch's embedded, real-time fabric OS. This operating system includes standard measurement interfaces, a full range of management tools and seamless links to world-class storage management solutions from StorageTek. You get heterogeneous device connectivity, automatic data routing and a seamless upgrade path to other SilkWorm products. The SilkWorm 3900 switch OS supports:

- > SNMP-based interfaces to access switch information
- > Switch management through a command line interface, WebTools or Fabric Manager
- > End-to-end fabric visibility through advanced performance monitoring
- > Real-time health monitoring through Fabric Watch
- > Third-party SAN management application development through the API

ONE FAMILY, READY TO GROW

The SilkWorm 3900 switch is forward and backward compatible across the SilkWorm family of switches, so you have easy access to other systems at multiple price points. Plus, translative mode capabilities allow private loop devices to join the Fibre Channel SAN fabric at any time. The SilkWorm 3900 switch supports multi-vendor SAN environments such as those built on Microsoft Windows NT, UNIX and Linux, so you have freedom to define a low-cost, easy-to-manage SAN fabric that best meets your needs.

SECURITY MADE SIMPLE

Advanced Zoning capabilities group a SAN fabric into secure zones so that SAN-attached devices can access only their authorized storage resources. Additional control is provided through hardware-enforced zoning by WWN. With the SilkWorm 3900 switch, you simplify IT administration while better controlling data access.

AN ADAPTABLE INVESTMENT

The SilkWorm 3900 fabric switch allows you to create a flexible SAN infrastructure. It's backed by training and education from Brocade and Professional Integration Services from StorageTek, so you get all of its benefits in the least amount of time. Combined with StorageTek's world-class storage systems and solutions, you get a complete, adaptable solution to meet the needs of your SAN environment today and tomorrow. To learn more, visit StorageTek at www.storagetek.com.

PERFORMANCE	
Performance	Auto-sensing 1- and 2-Gb/sec port speeds
ISL Trunking	Up to four 2.125 Gb/sec ports per trunk; up to 8.5 Gb/sec per ISL trunk
Aggregate bandwidth	128 Gb/sec end-to-end
Fabric latency	<2.1 µsec with no contention, cut-through routing
Maximum frame size	2,112-byte payload close up space
Switch core	Non-blocking
CAPACITY	
Fibre Channel ports	32 universal ports (E, F, and FL)
Scalability	Full fabric architecture with 239 switches maximum
Certified maximum	
COMPATIBILITY	
Interoperability	SilkWorm 2000, 3000, and 12000 series of switches
Classes of service	Class 2, Class 3, Class F (inter-switch frames)
Port types	FL_Port, F_Port, and E_Port; self-discovery based on switch type (U_Port); optional port type control
Data traffic types	Fabric switches support unicast, multicast (256 groups) and broadcast
Media types	Small Form-Factor Pluggable (SFP), LC connector
Laser	Short-wave, long-wave and extendable long-wave
MANAGEMENT	
Fabric services	Simple Name Server, Registered State Change Notification (RSCN), Alias Server (multicast), and Brocade Zoning, Advanced Zoning, Extended Fabrics, Fabric Watch, ISL Trunking and Remote Switch (some services are optional)
Supported software	Telnet, SNMP, WebTools and Fabric Manager (optional)
Management access	10/100 Ethernet (RJ-45), serial port
Diagnostics	POST and embedded online/offline diagnostics
MECHANICAL	
Enclosure	Back-to-front airflow, power from rear, 1.5u, 19-in., EIA compliant
Height	2.58 in. (6.55 cm)
Depth	23.06 in. (58.56 cm)
Width	16.87 in. (42.86 cm)
Weight	Single power supply: 31.60 lb (14.33 kg) Double power supply: 35.80 lb (16.24 kg)
Mounting options	Rack-mountable in standard rack; Telco-style mid-mounting
Options	Redundant power supply, SFP media and rack-mount kit

ENVIRONMENTAL	
Temperature	Operating: +50° to +104° F (+10° to +40° C) Non-operating: -13° to +158° F (-25° to +70° C)
Humidity	Operating: 20% to 85% non-condensing at 104° F (+40° C) Non-operating: 10% to 85% non-condensing at 158° F (+70° C)
Altitude	Operating: up to 9,800 ft (3,000 m) Non-operating: up to 40,000 ft (12 km)
Shock	Operating: 80 G, 2.4 ms, half-sine Non-operating: 20 G, 11 ms, half-sine wave
Vibration	Operating: 0.5 G, 5-500 Hz Non-operating: 2.0 G, 5-500 Hz
POWER	
AC input	Nominal: 100 to 240 VAC auto-ranging; 5.0 A
Frequency	47 to 63 Hz
REGULATORY COMPLIANCE	
Canada	Safety: CSA 60950, EMC: ICES-003 Class A
United States	Safety: UL 60950, EMC: FCC Part 15 Class A
Japan	Safety: IEC 60950 A4, EMC: VCCI Class A
European community	Safety: EN60950 TUV, NEMKO, EMC: EN55022 Level A, EN55024
Australia/New Zealand	EMC: AS/NZ 3548
International	Safety: IEC 60950, EMC: CISPR 22
Fibre Channel standards and revisions	FC-AL-2 Rev 7.0 FC-FLA Rev 2.7 FC-GS-3 Rev 7.01 FC-FG Rev 3.5 FC-FS Rev 1.7 FC-PH Rev 4.3 FC-PH-2 Rev 7.4 FC-PH-3 Rev 9.4 FC-PLDA Rev 2.1 FC-SW-2 Rev 5.4 FC-VI Rev 1.6 IPFC RFC 2625



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About StorageTek®

Storage Technology Corporation (NYSE: STK), a \$2 billion worldwide company with headquarters in Louisville, CO, has been delivering a broad range of storage management solutions designed for IT professionals for over 30 years. StorageTek offers solutions that are easy to manage, integrate well with existing infrastructures, and allow universal access to data across servers, media types and storage networks. StorageTek's practical and safe storage solutions for tape automation, disk storage systems and storage integration, coupled with a global services network, provide IT professionals with confidence and know-how to manage their entire storage management ecosystem today and in the future.

StorageTek products are available through a worldwide network. For more information, visit www.storagetek.com, or call 1.800.786.7835.

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